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ANIMAL LIFE

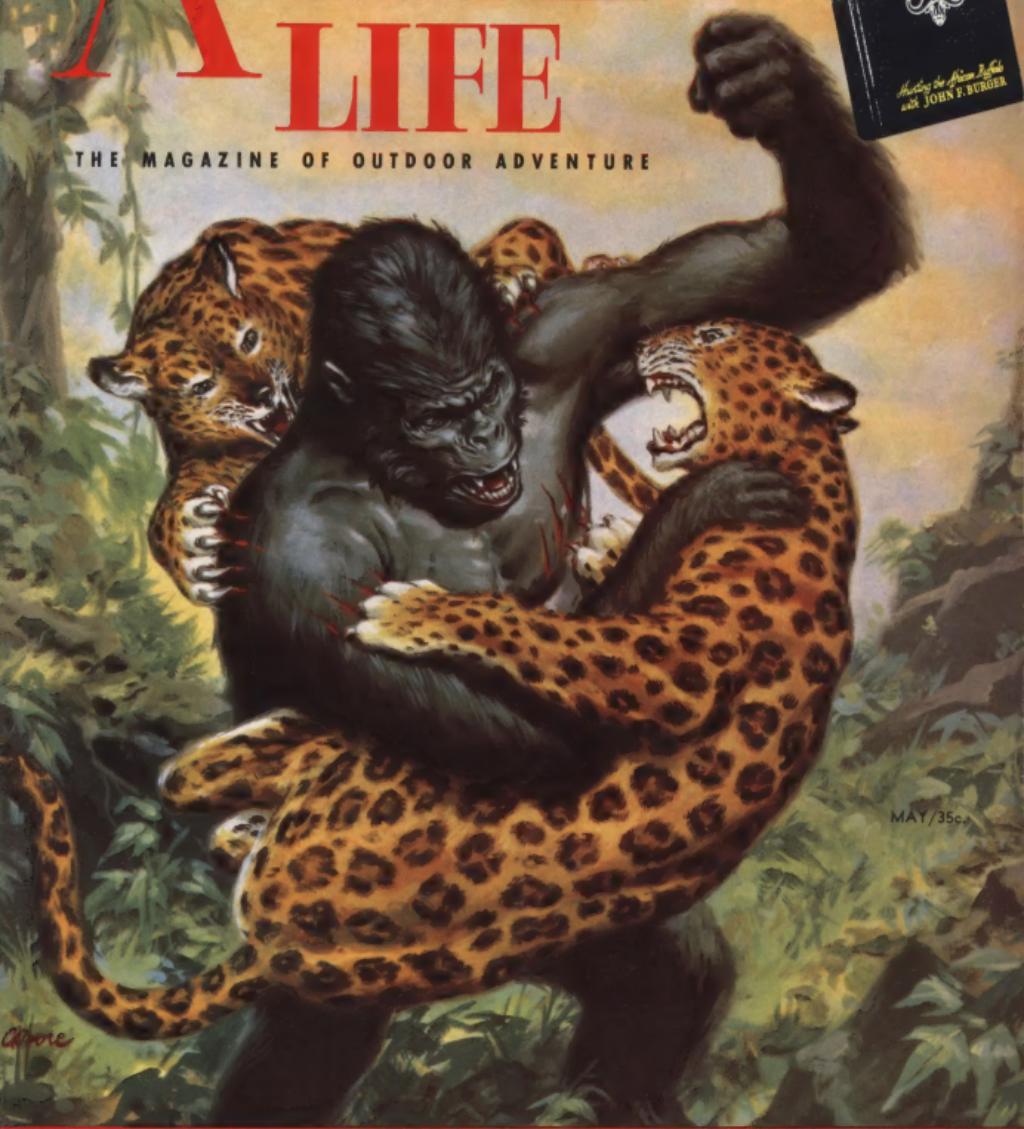
THE MAGAZINE OF OUTDOOR ADVENTURE

Horned
DEATH



Hunting the African Buffalo
and JOHN F. BURGER

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I CAPTURED THE FIRST OKAPI--

ATTILIO
GATTI

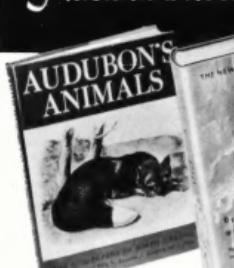
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ANIMAL LIFE

THE MAGAZINE OF OUTDOOR ADVENTURE

VOL. 1, No. 2 MAY, 1954

JOSEPH WEIDER

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Editor

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Associate Editor

The report that we are able to make in this, the second issue of ANIMAL LIFE, is most favorable and encouraging. The response to our first issue has been altogether satisfactory. Readers are unanimous in the opinion that there has been too much fiction published as fact concerning animals, that it is high time something is done about it—and that we are doing it.

Parents, particularly, seem pleased with our efforts. It appears that many parents, perhaps the vast majority, are concerned about their children's predilection for lurid comic books and shoot-'em-up stories. They tell us that ANIMAL LIFE is a readily accepted and acceptable substitute for such trash. Mothers and fathers say that our stories are interesting and exciting enough to appeal to junior, even though he is being instructed at the same time. That, we claim, is something to be proud of.

The editors of ANIMAL LIFE will continue their efforts to issue a magazine that distinguishes fact from fiction and gives its readers the best obtainable stories, articles and illustrations on birds and beasts and their lives. As the magazine grows bigger, new features will be added and old ones expanded.

Remember, this is your magazine and if there is anything you think should be added to it, write and let us know. As soon as possible, the magazine will be issued monthly instead of bi-monthly.

Readers' preferences for the articles in our December issue were interesting and definite. Decidedly in the lead were "Death on the Veld," (16 per cent of all the votes) and "Ngagi—Killer or Coward?" (15 per cent). Then came "Horned Juggernaut," (10%), "Questions and Answers" and "Hoofbeats Through History" (each 8%).

Opinion on all the other articles was pretty evenly divided, indicating, we think, that we achieved a good editorial balance. And any time we don't, you let us know, and we will take steps.

David P. Willoughby

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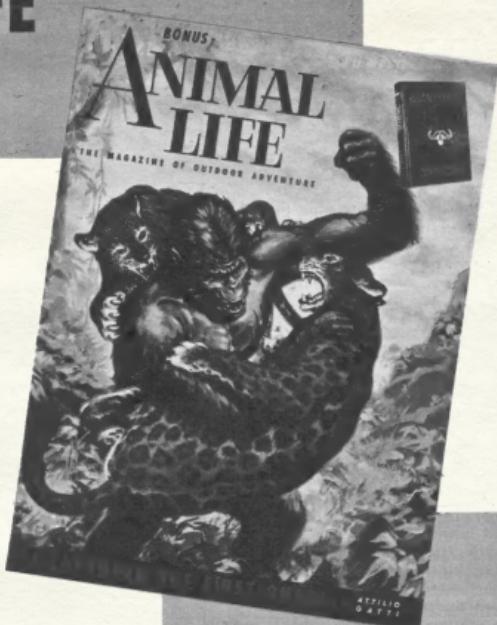
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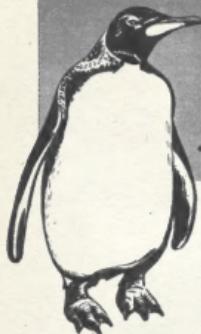
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BE TOLD FROM THE STATE OF WEAR
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THAT USED TO TELL A HORSE'S AGE



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ARE NUMBERED! AN "INVENTORY"
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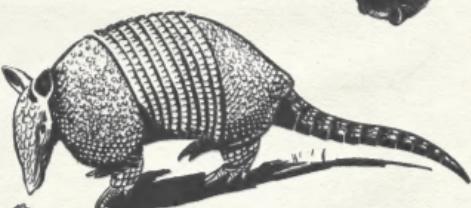


OCTOPUSES AND SQUIDS ARE THE
ONLY ANIMALS THAT CAN "JET PROPEL"
THEMSELVES THROUGH THE WATER BY
EJECTING A STREAM OF IT BACKWARDS



THE ONLY MAMMAL IN THE UNITED
STATES THAT CAN HANG BY ITS TAIL
IS THE OPOSSUM

AN OWL CANNOT MOVE ITS EYES
IN THEIR SOCKETS THE WAY OTHER
BIRDS CAN. THAT IS WHY IT HAS
TO TURN ITS HEAD ALMOST IN A
COMPLETE CIRCLE



THE TARSIER IS THE ONLY MAMMAL
THAT CAN CLING LIKE A FLY, DUE
TO THE SUCKER-PADS ON ITS FINGERS
AND TOES



THE PEBA, OR NINE-BANDED ARMADILLO,
ALMOST ALWAYS GIVES BIRTH TO FOUR
YOUNG AT A TIME, ALL OF THE SAME
SEX, BEING TWO PAIRS OF IDENTICAL
TWINS. ALL FOUR YOUNG COME FROM
A SINGLE FERTILIZED OVUM



Jungle Fury

Editor's note: We know of no authenticated recorded instance in which a white man has ever witnessed a fight in the jungle between a gorilla and a leopard. However, natives frequently report having seen such encounters. From such stories that have been received by us, the editors of ANIMAL LIFE have drawn this word picture, which seems as factual as possible under the circumstances.

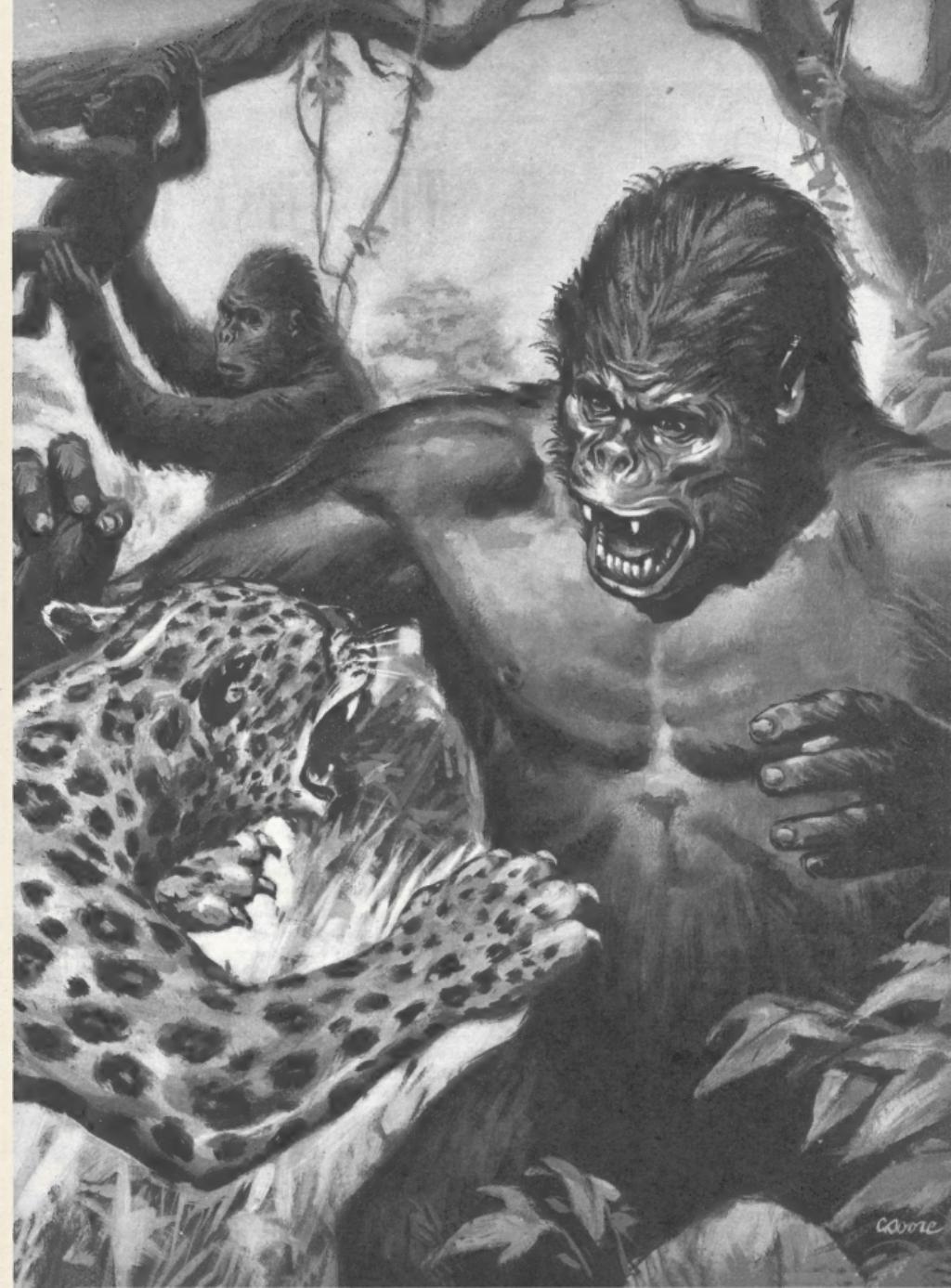
ILLUSTRATED BY LESTER PEARSON

THE two native tribesmen came upon the troop of gorillas quite by accident. The great apes apparently had wandered far afield in search of food. The natives believed that the man-apes belonged some 15 or 20 miles deep in the jungles of the Cameroon, not almost at the edge of the clearing where they observed them.

When left alone, there is no more peaceable animal in the African forest than Ngagi, the gorilla. Usually he will go out of his way to avoid a fight, even with an inferior foe. But if he is forced to fight, he will do so with reckless abandon and his gigantic size and strength make him a terrible antagonist as the natives testify after witnessing the rare spectacle of a male gorilla in mortal combat with not one, but two, deadly foes.

Night was about to fall and what had apparently been a large band of gorillas had broken up into family groups. The father gorillas were making nests, preparatory to putting their families up for the night. The nests, constructed of interwoven vines and branches, were on the ground at the foot of trees. Gorillas have virtually nothing to fear aside from an *(Continued on page 49)*

With one swift motion the mother gorilla seized her baby by one arm and fairly shoved it into the tree behind her. At the same instant, her mate met the charge of the cats.



coone



The first Okapi

By ATILIO GATTI

Commander and Mrs. Attilio Gatti properly attired for capturing Okapi at the expedition's base camp deep in the Ituri Jungle.

THE story of Toto (a native word meaning "little one") is not an everyday tale. In fact, as far as I know, it was the first time that such events had happened in the dark, dank depths of the equatorial jungle of the Belgian Congo. And it certainly and definitely was the first time when, in my 34 years of African life, I found myself transformed from an explorer into an animal's "dry nurse" and foster parent.

The very beginning of this particular affair was something that I was not able actually to witness with my own eyes because the terrifically thick entanglement of trees, vines, plants, shrubs and bushes inside which Toto and his mother were hidden at the start of that unforgettable day was absolutely snoop-proof. But I can easily reconstruct those early morning hours, as clearly as if I had watched them in person, simply by recollecting what I had learned and observed during so many unsuccessful previous attempts.

On the day when Toto entered my life, I had already spent six long, exhausting months in that part of the Ituri Forest (which no white nor black man had ever penetrated before my companions, our Wambuti Pygmies and myself)

all for that sole purpose of discovering one by one the secret habits and customs of that strange and most elusive inhabitant of the equatorial evergreen rain Jungle—the Okapi. This day, I had only to put together some of the many facts that so much endurance and persistence had revealed to me, both by direct experience and by patient questioning of the Wambuti, to know exactly every "domestic" detail of the life of a baby Okapi and his mother in their small, cunningly-hidden jungle home.

Now, in retrospect, I cannot think without a certain amusement of that early April day when I first set out to try to find out all there was to be learned about the Okapi, to photograph this freak of nature which belongs to the giraffidae family—but which, in addition, has the body of an antelope, the striped legs of a zebra, the stiff mane of a horse, independently-rotating eyes such as those of a chameleon—and to capture and bring to captivity young and adult specimens of this "living fossil" which is a descendant of the long-extinct Samotherium of the Lower Pliocene of Europe.

My enthusiasm would have been slightly dampened had I then had even a vague idea of the hardships and disappoint-

ever captured by a white man



Commander Gatti gives the "baby" one of the "lessons" by which it learned the facts of life and living in captivity sans parents.

ments which were to be my daily lot for so many months to come. Luckily unaware of the future, I was able to enjoy fully the thrill of the moment. In the small clearing which we had literally carved out of the jungle's almost unbroken thickness to establish the expedition's Base Camp, my little foot-safari presented quite a picturesque appearance.

Near the beginning of a path worn through the dense vegetation by the continuous passage of elephants, the five audacious Wambuti guides who had volunteered for the job stood in readiness.

Four, or four and a half feet in height, their copper-colored skin was almost invisible beneath the black, red and grey paintings of ashes, ochres and vegetable juices with which they had smeared their ugly but pleasant faces and their solid, muscular little bodies. Covered only with tiny loin cloths of the soft, strong "material" they obtain by soaking and patiently beating for hours and and hours the bark of certain trees; their heads covered with diminutive straw hats which always seemed of a size smaller than required by nature and topped by tufts of the colorful plumage of rare birds, the Wambuti were armed with their short



This stuffed museum specimen of an adult Okapi shows the beautiful markings of this rare and shy jungle creature.

The first Okapi ever captured by a white man



The Wambutis celebrate the capture of the Okapi and the presents of salt with hours of dancing and singing.



Gatti rewards the pygmies with presents of salt, blankets and tobacco. The little people were grateful.



Commander Gatti in stockade erected to house captured Okapi, gives Toto one of his innumerable "lessons."

spears and the little bows with which they know how to shoot poisoned arrows with the utmost precision up to 200 feet.

The gun-bearer followed, a native from the road, who until a few years before had been a cannibal, but who now had taken a grand air because of a pair of tattered shorts and, of all things, a tail coat with elegant silk lapels, arrived through who knows what adventures to the heart of the equatorial jungle.

Of course, his proper place would have been just behind me. But as soon as I noticed the testy way, the elaborate precautions with which he handled my rifle, I thought it would be safer for all concerned, (including myself), to keep him in front, on the principle that, in that scary jungle, nobody would run away in a forward direction and that, if he did something really wrong with the loaded rifle, I would be able to catch the gesture in time and to stop him before an accidental bullet tore through someone's body.

Then, I followed; and, to judge by the admiration visible in the eyes of my retinue, I must have been quite imposing. Spick and span in helmet, bush-blouse, shorts and Newmarket boots just unpacked from the makers' boxes, I had nonchalantly loaded myself with every possible apparatus in order to be able to take, at what I thought would be instantaneous speed, as many photographs as possible of the first Okapi we would encounter—a meeting which, according to the natives, was bound to take place in no time. Suspended by a strap, there reposed on my chest a huge Graflex camera. Other straps supported at my sides, in easily reachable positions, a light-meter, the leather case of a long telephoto lens and leather boxes containing film packs, filters and enough spare lenses for every condition of light I might find.



Gatti and Co. built hundreds of camouflaged Okapi pits in which they eventually captured two fine adult specimens.

Behind me awaited a group of porters loaded with various other cameras of smaller, bigger, sharper, quicker types; tripods; a small tent, a camp bed, a folding bath; some food and the necessary implements to cook it, and a box with clothes, toilet articles, etc.

Having made sure, with a last glance, that everything was in order, I gave the starting words—"Basi! Safari!"—and in a few seconds my little caravan disappeared into the green tunnel of the elephant path.

Finally, the moment had arrived, the moment I had dreamed of during two years of painstaking preparations and organization. Finally, now I soon would find myself face to face with the Okapi, that mysterious, fantastic, recently-discovered creature about which so little was known and which no one had ever succeeded in photographing in freedom or, even less, in capturing alive.

Naturally, before sailing, I had learned all I could about the *Okapia johnstoni*, seen the few poorly-mounted specimens exhibited in European and American museums, and made a special trip to go and watch the only Okapi living in captivity at the time, a quite miserable, dopey-looking specimen which pygmies had captured and given to a missionary who, in turn, had brought it to the Antwerp Zoo. Still I didn't have even the slightest conception of how Okapis would look and act when free in their own kingdom, that immense equatorial jungle, eighty times larger than Belgium and still mostly unexplored, which is the only place in the world where the Okapi survives in present times.

We had barely started when my excitement began to be smothered by worry. How would I ever manage to watch and photograph Okapis, apparently the jungle's most shy and elusive denizens, while attempting to force my body, which



Here an Okapi has just fallen into pit. Each string is connected with camera such as one which took this.

suddenly felt so heavy and clumsy, through that jungle—practically an unending solid wall of madly-scrambled vegetation?

Ahead of me the pygmies, more than walking, seemed to be gliding, slipping through, every obstacle like so many shadows, and at such a pace that I was beginning to pant.

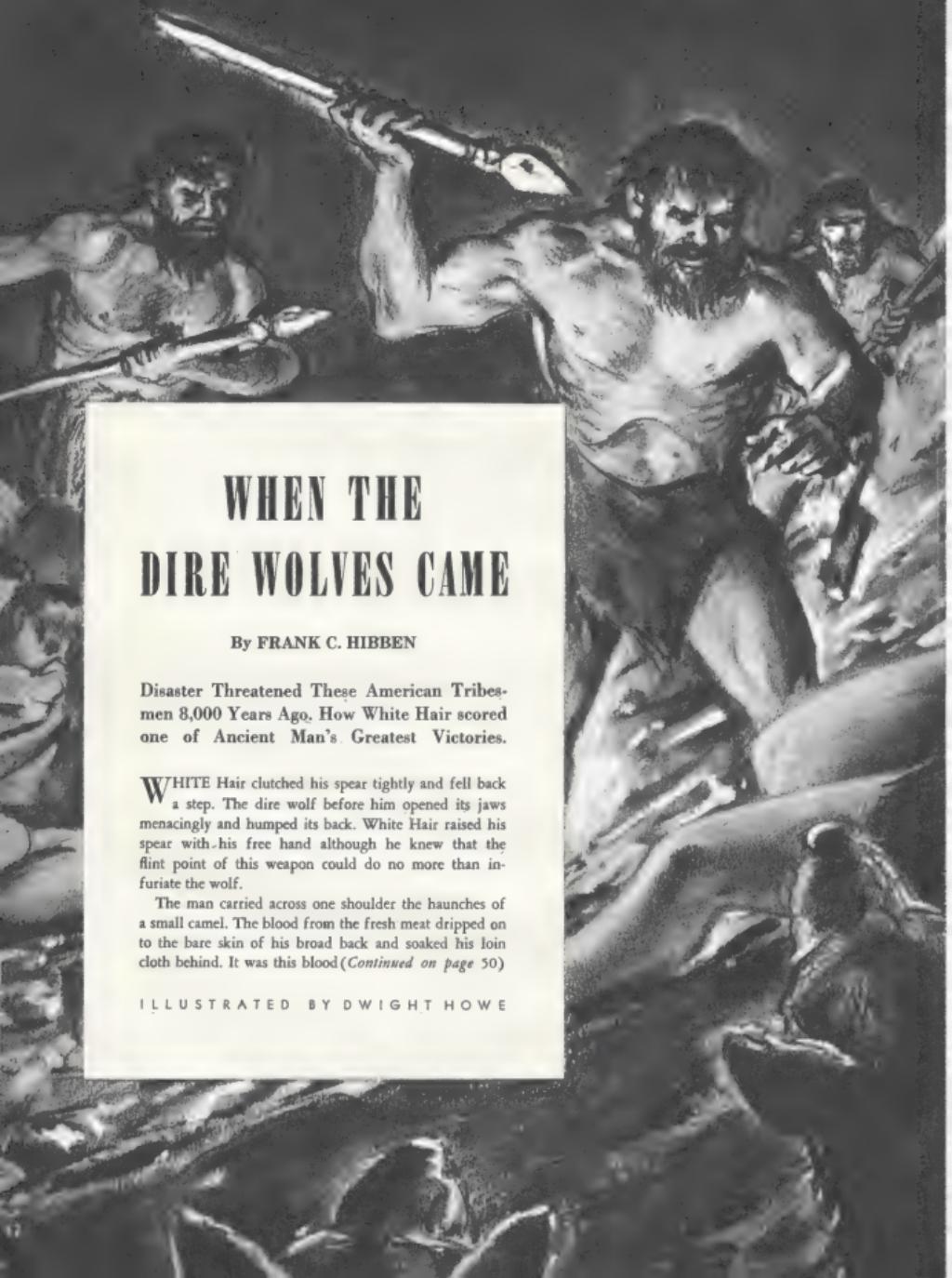
My gun bearer was easily following them, although a little less silently, as his feet had not the cunning of avoiding every dry stick or leaf.

But I—I was a real scandal, and I was becoming ashamed of myself. Bang!—a branch bounced off my helmet. Ccccrack!—a thorn which had grasped my clothes parted from them with reluctance. Crick-crack! Plof-plof!—my heavy boots at every step broke dry sticks or sunk deep in the gluey mud. To make it worse, all these noises, never ceasing in spite of all my efforts, were multiplied, amplified by the acoustics of the great green dome under which we were marching.

An hour had not yet passed when in a small clearing the Wambuti chief stopped to give time to his companions to scout around for fresh footprints.

I could have embraced that diminutive caricature of a man, so grateful I was for the moment of respite. I needed it badly. But I wouldn't have had the courage to ask for it, at that early stage—when he, the little monkey, was fresh and happy as if he had never moved, his respiration regular, his painted body shining and intact as if he had just emerged from his hut.

What a different proposition I was! One hour only and I looked like a perfect mess. My beautiful expensive bush-blouse was almost gone, so torn it was by the cruel thorns and sharp branches. What remained of it had even changed color, so soaked it was—outside with all (*Continued on page 46*)



WHEN THE DIRE WOLVES CAME

By FRANK C. HIBBEN

Disaster Threatened These American Tribesmen 8,000 Years Ago. How White Hair scored one of Ancient Man's Greatest Victories.

WHITE Hair clutched his spear tightly and fell back a step. The dire wolf before him opened its jaws menacingly and humped its back. White Hair raised his spear with his free hand although he knew that the flint point of this weapon could do no more than infuriate the wolf.

The man carried across one shoulder the haunches of a small camel. The blood from the fresh meat dripped on to the bare skin of his broad back and soaked his loin cloth behind. It was this blood (*Continued on page 50*)

ILLUSTRATED BY DWIGHT HOWE



A bulking form, half as to *Assassin*, stood in the half light.
The thing slavered over the limp form of a girl, already dead.

THE KING OF BEASTS

By Tromp van Diggelen and David P. Willoughby



A lion is distinctive from other cats. No one could mistake this grimly beautiful creature for any of his feline relatives.

A Zoologist May Regard the Lion as Merely a Cat of Large and Powerful Build, but the Splendid Animal Gives the Impression of Being a Monarch

TO HUNT the lion is to want to know more about this magnificent beast. My first direct encounter with the big cat who is oftentimes referred to as the King of Beasts came about in 1911 (*van Diggelen speaking*), deep in the wildest part of Southern Rhodesia.

I had determined to bag one of these animals and for the purpose had travelled to Kimberley Reefs to procure a 9mm. Mauser, a weapon in great favor among professional hunters.

A few days after I obtained my new weapon I killed a fine waterbuck. A big lion, attracted by the smell of freshly-killed meat, followed us to camp, giving me a chance to try out my new rifle. With soft-nosed bullets in the magazine, I set out tracking the lion along the Mazoe River.

My boy and I had walked about a mile when we spotted the beast, who dashed by about thirty yards away, apparently frightened by the first human being he had ever seen.

I broke through some underbrush and there he stood, about fifty yards away. He started to run, but I shot him in the shoulder, knocking him rolling into the sand. Suddenly the lion leaped to his feet and with a roar bounded toward me on three legs. I had no idea of where to hit the animal most

effectively, but I started firing more or less at random. My first shot penetrated his chest, throwing him into a heap. The animal made valiant efforts to get up and charge again, but his fighting days were over. With pity in my heart, I walked to within ten yards of the brave beast and killed him with a shot through the shoulder to the heart. This and later experiences showed me that, once wounded, a lion will never give up until he is dead. And I have been learning things about lions ever since.

A single glance at the head of a full-grown male lion explains sufficiently why he is called "The King of Beasts" The regal animal looks the part.

A lion is easily distinguishable from all other 'cats'. Its physical characteristics are a powerful, well-built body covered with short, smooth hair of a uniform tint; a broad face, long muzzle, and powerful jaws; and a tuft of black hair at the tip of the tail. A unique possession of the lion, in some specimens at least, is a horny nail or 'spur' hidden in the tuft of the tail. This structure, according to early naturalists, was used by the lion to prod himself into a fury. Actually, its function is unknown; and in any case the structure is so





Ancient Assyrians hunting the lion. In earlier times this beast roamed most of the face of the earth, even the British Isles.



A king and his queen at rest. This splendid lion and lioness are enjoying regal repose after a meal on the brushy African plain.



A lady is disturbed at meal time. This lioness is startled by the photographer's flashlight that interrupted her feast of zebra.

THE KING OF BEASTS

surrounded by the tail-tuft that the lion could not touch his body with it. In the male lion a more or less luxuriant mane covers the neck, chest and shoulders. It should be noted, however, that there are a number (perhaps 5 or 6) geographic races of the lion, and that even among the individuals of a given race there is generally a considerable range in coat color, development of the mane and proportions of the skull and teeth, although the overall size and body measurements are fairly uniform.

Most lions are of a light buff or tawny color, often of a somewhat gray cast. Occasionally the tint is reddish-brown. Normally, the mane of a male lion does not make its appearance until the animal is three or four years of age, and it continues to grow after that for several years. Lions in captivity almost always have fuller manes than those in the wilds, where bushes and thorns constantly catch and pull out the hair. Wild lions do not have the fringe of long hair along the middle of the belly, which is always present in maned menagerie lions.

Lions in earlier times roamed over most of the face of the earth. During the Ice Age, the great cats were to be found over all of southern Europe, Germany, France, and even the British Isles. But the long-continued glacial cold was too much for them, causing them to die out in the northern regions of Europe, or else to migrate southward. During

Roman days they lived in what are now Rumania, Greece, Palestine, and European Turkey. They held out until comparatively recently in Syria, Persia, Arabia, and Mesopotamia (Iraq). They were also formerly abundant in North Africa, in northern India, and in western Asia from the Caucasus Mountains to Afghanistan and Baluchistan. Today they are extinct throughout Asia except for a local group of some 250 individuals which live, under strict protection, in the Gir forest of the Kathiawar Peninsula in western India.

Incredible numbers of lions were captured alive (usually in nets) in ancient times for the Roman arena, and in due course the entire lion population of North Africa and Asia Minor was thus used up. The first fight using lions was given by the Roman ruler Scaevola, and the second by Sulla. In the latter exhibition there were a hundred lions in the arena. Julius Caesar gave a show in which there were at least 400 lions, and Pompey one in which there were 600! When the supply of the big cats from North Africa and the Near East was exhausted, they were brought clear from India, which in those days had more lions than tigers.

Although the lion probably originated in Asia, its chief home is now Africa. While it is being exterminated rapidly in all the settled districts, it is still distributed over most of the Dark Continent south of the Sahara.

Just as was the case with many other big-game animals, lions of earlier times were physically superior to those of today, as well as far more numerous. They are, indeed, be-



Co-author Tromp van Diggelen is surrounded by some of his intrepid safari boys on a mid-day respite from the rigors of a lion hunt.



A pride of lions on the African plains. This rare photograph shows both young and adult specimens looking their very best.



The royal family dines. The King keeps a watchful eye on the photographer as the Queen and Princes partake of a zebra entree.



Family portrait. Mama, papa and junior pose haughtily. Perhaps no other animal so looks the part of royalty as these regal cats.



A lioness of Kruger National Park standing over a bull inyala she has just killed. Inyala are rare and attractive African antelope.



Masai warriors and three lions they have just speared. To kill a lion single-handed is a ritual marking a boy's entry to manhood.

coming a rare animal compared with their abundance even fifty years ago. Theodore Roosevelt, writing in 1914, said of the East African lion that it was "universally distributed . . . from the coast inland to the high plateaux, and is wanting only in the dense forests and absolutely waterless desert tracts". But no longer does it have such a widespread distribution.

Virtually gone, too, are the days when lions were shot at close range, on their feet, with rifles of limited power and dependability, giving the hunter a sense of personal conquest. Today, the customary procedure is to lure the lion with bait (the carcass of a zebra, buffalo, or antelope), then shoot the animal after it is in a gorged, semi-comatose condition. Thus the hunter is, in the interests of "safety", robbed of the former thrills which made lion hunting a challenging sport to Roosevelt and many others.

In point of physique, the lion and the tiger are almost identically the same size, and share the honor of being the largest and strongest of existing members of the cat family. An average-sized, fully-grown male African lion measures about 36½ inches in height at the shoulder, and weighs about 410 lbs. The total length in a straight line (not over the curves of the body) from tip of nose to end of the last tail vertebra averages 9 feet 2 inches, of which the tail takes up 3 feet 3 inches. Female lions, or lionesses, are appreciably smaller but no less heavily built than males. Their height at the shoulder averages 32 inches. (Continued on page 52)

THE DURNEST FIGHT I EVER SAW

By SHEP SHEPHERD

Barney Was a Little Cuss, but he had the Biggest Chip on his Shoulder of Any Elephant You Ever Saw. Al. G. Barnes, the Circus Man, Bought the Tiny Trouble-Maker by Mistake. Barnes Thought he was Purchasing a Baby Bull. Instead, he Got a Trunkful of TNT

Tusko, the huge Indian bull, was not only possibly the biggest elephant alive, he was one of the meanest. But little Barney tackled him.





Barney, the vicious little dwarf, is loaded aboard a small truck, which shows by comparison how tiny the little bully really was. Size never deterred Barney, however. He'd fight anything, any time.

THE day I first saw Barney he was trying to whip the biggest elephant on earth. He was roaring and lunging at Tusko, trying his level best to gore him in the side. Tusko was the star attraction with the Al G. Barnes circus. Barnes claimed he was the largest Asiatic elephant ever in captivity, weighing very nearly as much as the renowned Jumbo, who was of the African species. An average male Asiatic elephant weighs about 7000 lbs. Tusko is said to have weighed 14,303 lbs.

By the time Barney joined the show Tusko had "gone bad" to the point where he had to be restrained. An iron bar was fastened between his tusks and chains held his head down and also prevented him from swinging his head and tusks to either side. He was so well manacled that about all he could do was walk in a straight line.

Barney looked like a baby alongside Tusko. He stood only four feet six inches high at the shoulders. He was a rare dwarf elephant of the Asiatic (or Indian) species. Barney made up in meanness for everything he lacked in size. Barnes once told me Barney was the meanest elephant he had ever seen. This was during the roaring twenties before the Al G. Barnes circus passed into the hands of John Ringling.

Barney was a troublemaker every day of his life. Barnes bought him by mistake. One day he received a message from an animal trainer in Singapore saying he had a baby elephant for sale. The price was right so Barnes sent the money then

started figuring how to get the elephant across the Pacific without having to send a man after him. Arrangements were finally made with the Wells-Fargo Company to handle the shipment. It was the first time an elephant had ever been shipped by express across an ocean and Wells-Fargo got themselves a gob of free advertising out of the deal.

The elephant was landed in San Francisco and Barnes was there with a trainer to accept delivery. The minute he laid eyes on the little fellow he knew he had been tricked. Barney, as Al named him on the spot, was sporting a pair of long tusks. Baby elephants don't have tusks so Barnes knew he had bought a dwarf. What's more this particular dwarf was a bad tempered jerk as revealed by his eyes which were set far back in his head and were sloping, not full and rounded like a good elephant's eyes.

From the very day he came on the lot Barney started making trouble. He couldn't be trusted alone anywhere on the lot. The only time he was at all docile was when chained to a police elephant.

Every circus elephant herd has two or more police elephants. They are always females and the best fighters in the herd, yet docile and easy to handle. They are chained alongside any elephant that stampedes or tries to rampage and the culprit usually settles down in short order after the police elephant has slammed him around a few times.

Barney was so small the

(Continued on page 54)



Cold,

THE TRUTH ABOUT THE CROCODILE

By MYLES H. JORDAN



Alligator (left) and Crocodile (right), showing the difference in their head proportions and bodily ornamentation.

THE legends concerning the prodigious memory of the elephant might apply with equal truth to the crocodile.

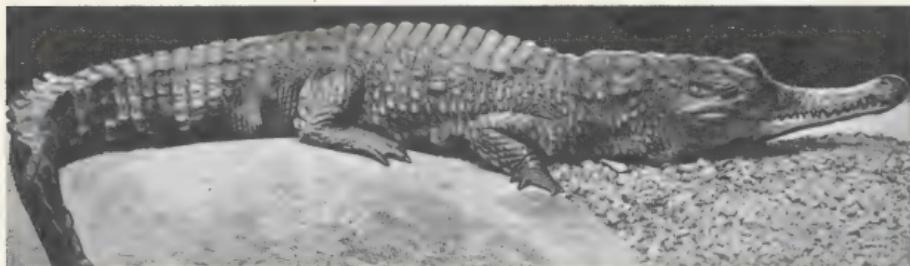
Witness the case of the unfortunate fisherman Sate. Sate lived in a village on the Zambezi and pleasantly passed his days in fishing. Catches from the bank had been light and, against the advice of his friends, Sate decided to try his luck from a rock that rose above a water-lapped ledge, well out in the stream. This spot had hitherto been reserved for the exclusive use of a very large crocodile, whom Sate proceeded to dispossess.

Safe on his perch, Sate daily enjoyed good fishing under the malevolent observation of the erstwhile tenant who, from time to time, helped himself to a fish as it was being brought in. Beyond throwing stones and taunts there was nothing the unarmed man could do about these forays on his fish. In the evenings, around the cooking fire, Sate was inclined to boast. Had not events proved that he, Sate, was the clever one?

There came the morning that Sate hooked a big vundu, a species of barbel. As he fought the fish he yelled loudly to frighten the crocodile, dreading the underwater rush that would leave him with only the head. Nothing happened. Soon the fish was gasping alongside the ledge. From the bank, spectators saw Sate climb down and kneel to seize the fish. And they heard his shriek of terror as the crocodile erupted from the water and smashed into the fisherman, hurling him into the river. (Continued on page 56)

Morose, Stealthy, fear-inspiring, Uncommunicative Introverts, These Crawling Creatures Were Once Referred to a "Loathsome Saurians." Perhaps no Other Form of Animal Life is so Untouched by the Higher Emotions. All in all, They are Thoroughly

Cruel and Calculating



African Slender-snouted Crocodile (Crocodylus cataphractus), one of the smaller species which is found in the Congo Basin.



Osteolaemus tetraspis, or West African Dwarf Crocodile, is a diminutive form measuring 5 feet in length on an average, maximum 6 feet.



The Nilotic Crocodile is one of the largest. Found in Africa and Madagascar, a 19-foot, 6-inch specimen is recorded.

The most Terrible Creatures ever known

By DAVID P. WILLOUGHBY

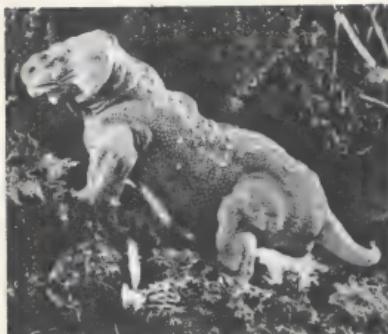
Tyrannosaurus Rex, the Most Vicious Monster the World Has Ever Known, had to Fight for his Food—and His Life—in Accordance with an Immutable Law of Nature

WITNESS a drama that no man—living or dead—has ever seen.

The setting is an inferno of blistering heat, awesome vegetation and fearsome animal beings the like of which humans have never known. The time is 80 million years before the birth of Christ. The place, Earth.



The most Terrible Creatures ever known



This weird reptile is called *Pteriasaurus*, meaning "helmet-cheeked lizard." It lived on land, walked bow-legged and ate herbs and vegetation, not flesh.



Many kinds of *pterodactyls*, or "flying dragons," swooped through the air on bat-like wings during the Cretaceous period. They were not related to birds. This species had a 3-foot wing spread.

A terrible Creature stalks the land. Twenty feet into the air rears its hideous head, four feet of nightmare highlighted by the most cruel mouth Earth has ever known. The Creature's body is a loathsome mass. Its hind limbs are of massive proportions, ending in repulsively birdlike three-toed feet armed with claws eight inches long. Its front feet are small, but taloned. It walks upright, balancing itself on a tail of great strength and destructive power. From head to tip of tail it measures 50 feet. It is an obscene Creature, a sin against nature as we human beings know it. It is *Tyrannosaurus rex*, King of the Tyrant Lizards, the most destructive life engine that ever lived.

The vicious dinosaur, which eats nothing but meat that has been crushed in its dragonlike jaws, is seeking food, food which has become all too scarce of late. If The Creature could reason, he might think this was because the vegetation of the world is changing rapidly. The earth is being overrun with hardwood trees and flowering plants that are replacing the conifers, cycads and other vegetation upon which fed the herbivorous dinosaurs that had provided sustenance for *Tyrannosaurus* for millions of years. Now the plant-eating dinosaurs, unable to acustom themselves to the rapid change in diet, are dying out, depleting The Creature's meat supply.

Or, The Creature might blame the mammals, which have emerged on Earth recently, for his hunger. These pesty alien animals, though small, are active, predatory and expanding rapidly. And they not only eat the eggs of the herbivorous dinosaurs that are The Creature's principal source of meat, but impudently, the eggs even of *Tyrannosaurus rex* him-

self, King of the cretaceous jungle!

But the Creature does not seek reasons for his hunger. He cannot. For all his immense size, *Tyrannosaurus* has a brain weighing only a few ounces, little more than a small dog's. So The Creature stalks the Earth in vicious, unreasoning rage and hunger.

A movement attracts The Creature's attention. Some three hundred yards away is a struthiomimus, a rare tidbit in these days of *Tyrannosaurus rex*. Much smaller than The Creature, this herbivorous animal has long, slender legs that will cause imaginative scientists millions of years later to fondly nickname him "the ostrich dinosaur." These legs ordinarily could carry struthiomimus safely away from attack by The Creature, but one of them has been injured.

Tyrannosaurus rex cannot reason that his prey is helpless, but instinct sets him in pursuit of the pitiful, hobbling creature. Massive step by massive step he separates the distance between himself and struthiomimus. A few more ponderous paces and The Creature can sink his double-edged, saberlike, six-inch teeth into his delectable and powerless prey.

The Creature is about to rip with his vile teeth into the tinier animal, when there is a hissing like that of ten thousand snakes. Another *Tyrannosaurus* has been stalking the same prey! Two of the mightiest and most terrible creatures that ever walked the earth are met head on and must do battle for food! The same instinct that eons later will lead men to kill man, nation to destroy nation, will lock these two hideous monsters in mortal combat!

As the two kings of creation face each other for the fight, struthiomimus hobbles away to temporary safety.



Tyrannosaurus Rex, the most terrible meat-eating animal that ever lived, is consuming a hapless small dinosaur.



While dinosaurs roamed the land, other immense reptiles took to the water. These are plesiosaurs, or long-necked sea lizards.



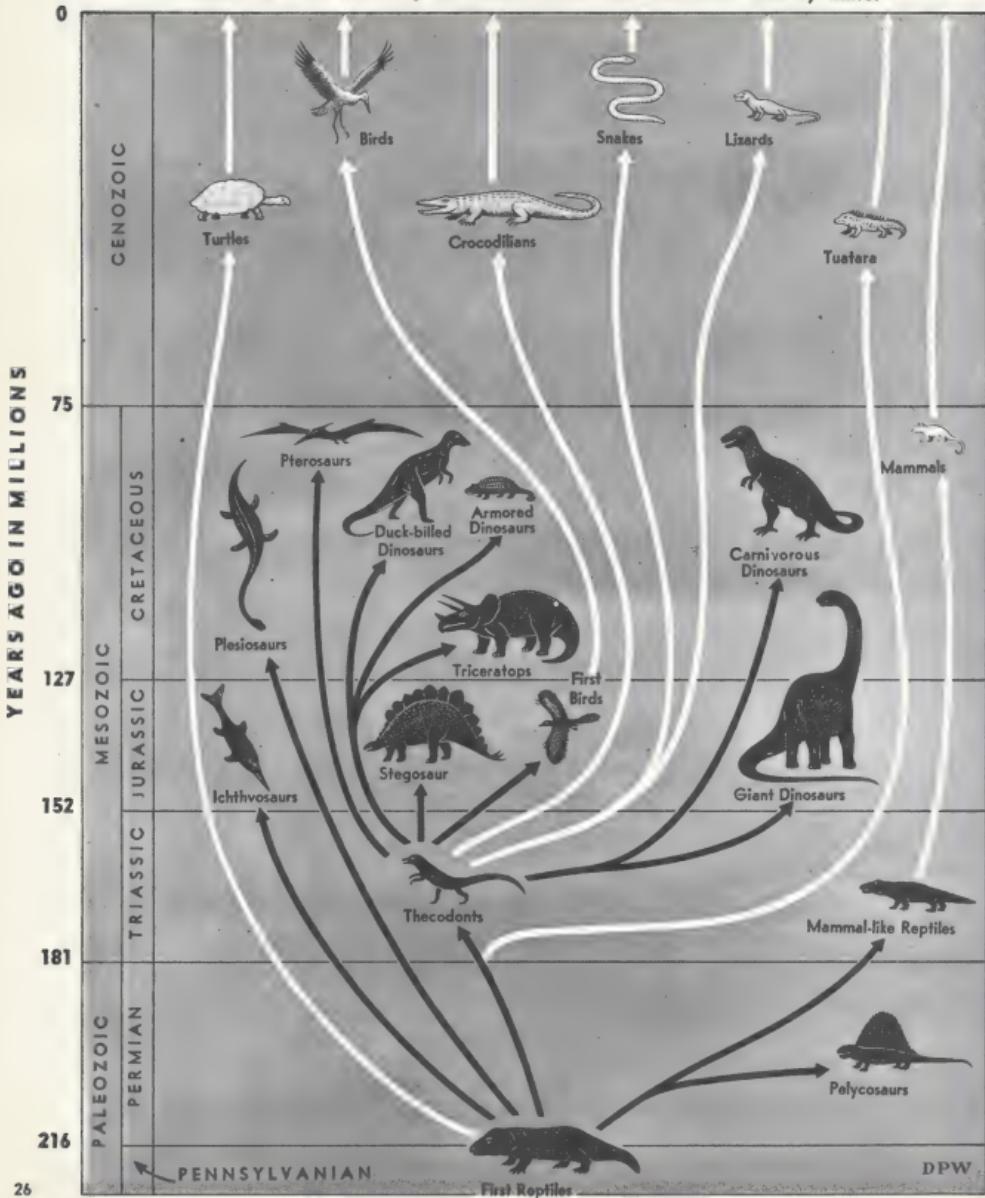
This long-snouted marine reptile is Ichthyosaurus, the great Fish lizard. It populated the seas during Jurassic times.



Stegosaurus was so heavily armored it was practically invulnerable. Its brain was so small it was very stupid.

FAMILY TREE of the DINOSAURS

Showing Some of Their Relatives who have Survived to the Present Day
 (The extinct lines are shown by solid black arrows; the "successful" lines by white)



The most Terrible Creatures ever known



One of the best-known vegetarian dinosaurs was Triceratops, a three-horned, armored giant that was a contemporary of the dreaded *Tyrannosaurus Rex*, King of the Tyrant Lizards. *Triceratops* laid eggs and had a tiny brain — no larger than a kitten's.

The two great beasts paw with their puny front legs like boxers sparring for an opening. Suddenly one lunges with his head and snaps his massive jaws across his foe's back. The teeth sink deep, but the foe lashes out with his powerful tail, almost, but not quite, dislodging his adversary. Blood flows from the back wound to the trampled ground and into the mouth of the aggressor, seeming to give him even greater strength. He fastens first one, then another of his vicious talons around the body of the animal that has interrupted his stalking of struthiomimus. Deeper and deeper sink the vile teeth. A vast mass of flesh is torn from the back and the aggressor again sinks his teeth into his victim. Again and again this happens, until finally the interloper lies dead, his body bloody and parts of it strewn in the welter of gore. *Tyrannosaurus rex* crunches the flesh of *Tyrannosaurus rex* in massive, hideous jaws and a great battle between two terrible creatures ends.

Dinosaurs, of which *Tyrannosaurus rex* was the greatest and most fearsome, ruled the earth for more than 100 million years. Man, who has been in existence only a million years or so, is inclined to forget that he was not always "Lord of all he surveys."

Rightly, the name dinosaur, which comes from two Greek words meaning "terrible lizard," applies most appropriately to certain of the larger (and later) meat-eating forms. Actually, the dinosaurs were a remarkably varied group. Some were small, others large. Some ate meat, others herbs. Some laid eggs, others possibly brought forth their young alive. Their distribution was wide and, in one form or another, they ruled the land, water and

(Continued on page 58)



This is *Ceratosaurus*, a big, ferocious meat-eating dinosaur that flourished in Jurassic times, about 140 million years ago.



Fur seal and pup. These are rare in Antarctic, which abounds in hair seals, such as the Ross, crabeater, Wedell, and Leopard.



A female sea elephant, or elephant seal, and her pup sleeping. Elephant seal is largest of race, one of heaviest of land animals.



A young sea elephant pup lies in surf, getting accustomed to water and learning to swim before finally going to sea.



Crabeater seals on pack ice. Crabeater is most abundant seal in the Antarctic, possibly the most plentiful species in world.



A couple of female elephant seals quarrel noisily while their pups look on undisturbed. Bull seals really fight—man style.



A female sea elephant nurses its pup. Elephant seals have two-month breeding season in Spring on beaches of South Georgia.



A sea elephant pup which has just been released from longtime imprisonment in snow hole. It is starving and beginning to rot.



A sea leopard resting on ice pack. Leopard seals are most ferocious, have large powerful teeth, large heads, powerful necks.



Bull sea elephants fighting. After squaring up to each other by rising on hindquarters, one has lunged to tear at the other.

Monarchs of the Frozen South

By FRANK W. LANE

Five Species of Seals Abound in Antarctic Regions and all are Hefty, Hearty and Hale. Despite Some Vicious Natural Enemies, They Thrive and Rule Their Domain.

LEOPARD seals are perhaps the most ferocious of these interesting cold-climate animals who are monarchs of the Polar ice on which they spend a large part of their lives. They will not hesitate to attack a man if provoked. There is a recorded instance where a leopard seal pursued a man on the ice for half a mile!

Leopard seals grow to a maximum length of about 14 feet and weigh about 1,000 pounds. The leopard seal has a very large head and an immensely powerful neck. Its teeth are larger and stronger than any other Antarctic seal and are shaped like a trident, with three long, pointed cusps. They are well adapted for grasping and tearing the seal's prey, which consists largely of penguins, although fish, other seals and cephalopods (squids and (Continued on page 60)



A bull fur seal, very rare, wears fine coat like a true Monarch of the Frozen South.

THE ANIMAL WITH THE "GOLDEN" TEETH

By F. WALLACE TABER



Many an Amateur Hunter has Bagged a Big Tusker, but few Have Hung Around to See How the Precious Ivory is Extracted from the Huge Animals. A well-Known Big Game Hunter and Naturalist Describes the King-Size Tooth-pulling Job and how it is Done by Native "Dentists." A First-Hand, Authentic Account of one of the Most Skillful, Difficult, and Little-Known Jungle Operations.



A knife and the ever-present native "panga" are utilized to make opening cuts in elephant.



Final layer of cellular bone encasing the ivory tusk is cut away with a hatchet.



Ramisoni, famous Tanganyika native "skinner," begins to pull the nerve out



Nearly four feet of nerve from a six-foot tusk. Tusk weighed 41 pounds nerveless.

THE master billiard-player smoothly stroking a three-cushion shot, the concert pianist fingering a Chopin valse, the craftsman carving a priceless figurine, even the crapshtooter striving to throw a difficult "point"—all do their work, or play, better because of the existence of the material known as ivory.

There have been numerous substitutes for ivory billiard balls and piano keys and carving materials and dice, but none as satisfactory as the original article. For certain specific uses, both artistic and commercial, elephant ivory is worth *more* than its weight in gold. And how many know just how ivory is obtained?

Of course, everyone is aware that ivory comes chiefly from the tusks of elephants; and anyone who has safaried on the "Dark Continent" will verify that there are a lot of extracardiac heart beats connected with shooting the world's largest and, in some respects, most dangerous big game animal.

Scarcely indeed are amateur hunters who will not go into the minutest detail, given the opportunity, of just how they master-minded the demise of the mighty elephant whose ivory adorns their trophy room . . . how they pitted wits and won . . . how nerve-racking the chase . . . how fatiguing the stalk.

But who ever heard one of them boast, complain, explain or even talk about the extraction of the trophy's ivory?

Mighty few. For few are the American sportsmen who stick around to see the ivory extracted. That's a job left to the "wogs." For, from the bagging of an elephant to the collection of its ivory is a time-gap ranging from two-and-one-half hours to a full day's manual effort on the part of half-a-dozen native boys.

Like an iceberg, only a portion of the elephant's ivory protrudes from the surface. Fully a third of it lies imbedded deep in the cellular tissue that makes the elephant's head the most difficult living target in the world to penetrate with a rifle bullet. Each of the honey-comb cells is turgid with fluid and the rifle has yet to be manufactured that will penetrate any save the shortest route between skin and brain—an ear or a direct frontal shot. And many has been the head-on shot at a charging elephant which was deflected when the bullet collided with the hidden anchor-end of the mighty tusks.

One might anticipate, with a third of its ivory hidden from view, that nearly any bull elephant with a pair of tusks big enough to see would fall into the trophy class. But such is not the case. For there is another hidden gimmick that cancels out the bonanza of ivory. This is a hollow cavity that may run for two-thirds the full length of the tusk, carrying with it the nerve tissue that makes the tusk of an elephant nearly as sensitive as its trunk.

Separating an elephant from its (Continued on page 59)



This is the dog in some lucky pet-lover's life.



The cat in some equally fortunate person's home.

DOGS and CATS

By BETH BROWN

A Famous Authority on Pets Tells About the Animals We All Love, With Sidelights on the Lives and Loves of Hollywood Canines and Felines.

EVER since I can remember, there has always been a dog in my life. An alley cat—or two—was always taking pot-luck in my kitchen. By some mysterious underground grapevine known to them alone, both dogs and cats spread the cheery word that welcome was written on the doormat of my house—and they flocked to my back door, sure of a free hand-out.

The front door was equally busy.

Somehow both friends and strangers were constantly converging on my domain with a pet or pet problem in tow. I seemed to be a magnet for new litters of kittens and cartons of cute but unwanted puppies. The kind-hearted samaritans brought in their strays to keep my own dogs company at supper time. Dogs and cats of neighbors going on vacation—spent their vacation days with me. The world was merely

trying to be helpful. I wrote dog stories, didn't I? Well, here were some living models.

There were times I tried locking my door. But there was no key to the lock on my heart. So finally I submitted to a fate that has brought me much pleasure and pain and a knowledge of animals which is not found in books.

The Questions That People Ask

People often ask me why I dote so much on dogs.

Isn't it a nuisance to train them, bathe them, doctor them and feed them, particularly these days with the high cost of living?

What do you do with your pets when you go off on vacation? How do you manage to travel when you decide to take them along?

What kind of dog is it best to buy for a city apartment—



Rhubarb, the cat of movie fame. In a picturization of H. Allen Smith's hilarious tale about a cat that inherited a baseball team, Rhubarb, from the alleys, gained riches.



In dogs, comic Bob Hope goes in for the extremes, big and little pooches.



Victor Borge went to buy a boxer — wound up with two black poodles!



Esio Pinza and family spend enchanted evenings with gentle Dalmatian.



Clipot, who sparkles like namesake, is Crawford pet.

'and isn't a puppy a problem?

The Answers You Need to Know

Yes, there are problems galore when you own a dog. But every possession in life presents some sort of problem as if to balance the compensation which is your rich reward.

What if you have no dog and would like to own one? Perhaps your mind is a see-saw and you want some measure of reassurance. You want to know if a dog is worth the trouble of worming and washing and walking. Suppose he gets sick? What should you do if he nips the milkman? What if he takes a bite out of you?

Maybe you have a dog who chases cars, dislikes your neighbor's children, resents your relatives and chews up the parlor drapes.

These are only a few of the many problems when you have

a dog in your home. But with patience and perseverance you can solve most of them—and this column will do its very best to help you in this direction.

A dog is worth all the trouble in the world. You cannot buy his kind of love. From the moment you get that new dog—you make an amazing discovery. You now have a new lease on life!

You are no longer lonely. You now have a companion in the house, wakeful both night and day. You have someone to talk to who understands even your silent thoughts. Here is someone you can take on long walks that are good for your legs and lungs! Your life is full of new experiences. You learn to relax—to handle your every-day cares with a new aplomb.

(Continued on page 62)



HORNED DEATH

By JOHN F. BURGER



A BOOK CONDENSATION

ILLUSTRATED BY AL GOULD



Suddenly there was shouting and screaming. I got to my feet just in time to see a black mass of buffalo charging down on the truck.

The Point of View

HOW many agonizing hours I have spent on the trail of the Cape Buffalo, the "bad boy" of the African Bush! It is nearly forty years since I first accompanied a famous hunter on the trail of the buffalo and from that day I have hunted him assiduously.

For a good many years past the buffalo has claimed the doubtful honor of being "Hunters' Enemy No. 1," and he has been described variously as "the most dangerous," "the most vindictive," "the most cunning" and "the most aggressive" animal in Africa. Perhaps, in the view of some writers, he richly merits such an unsavory reputation. But for myself, I cannot agree with them entirely and I must dissociate myself from his long list of calumniators, that is, in so far

as his natural and inherent instincts are concerned. I will not dispute that in matters of retaliation and rendering evil for evil he has acquired and richly deserves his wicked reputation. But I do maintain that under *normal* conditions he is no more dangerous than any of the numerous antelopes which are considered harmless. Look over the long list of accidents and you will find that every one of them was due to provocation. In many cases the victims themselves were guilty of no provocation whatever, but provocation of some sort, at some other time, undoubtedly was responsible for the aggression.

In parts of the country where Buffaloes had not been previously hunted or molested I have often encountered herds or solitary animals and I cannot remember a single occasion on which such animals have shown the least sign

HORNED DEATH (CONTINUED)

of aggressiveness. As a rule, they will look at one in wonder and surprise, and only when they are approached very closely will they make a move. Then they will trot off in an opposite direction and often they will turn around to have another look. This they will do under *normal* conditions. But the trouble with buffaloes is that one can never tell whether they are normal or not! A lone old bull may have left the herd because the inevitable bickerings and squabbles had become distasteful to him. He finds happiness in solitude. He has no particular grievance to settle and if he should be encountered in the bush he will probably try to escape in the quickest possible time. Another bull may have suffered violence and wounds in fights with other herd bulls and have left the herd, not by choice, but because he was forced to do so. Such a bull has a grievance and, as likely as not, will resent the approach of a human being; he may quite possibly show his resentment by charging without direct provocation. Another may be suffering from gun wounds, and yet another from infirmity and disease. In such cases the animals are not normal and are almost certain to act in an abnormal manner. It is easy to understand, therefore, that the conduct of a solitary or herd bull is governed to a large extent by conditions, even as is human conduct.

The numerous adventures and narrow escapes I have had with buffaloes were due entirely to the fact that provocations of some sort were directly responsible. On several occasions I have hunted a year or more without a single untoward incident, and then, by contrast, I have had as many as three hair-raising adventures in the course of one week.

That a buffalo with a grievance to settle is one of the most dangerous animals on earth, if not the most dangerous, cannot be disputed, and it is well for those who hunt him to bear that in mind. The cunningness of a wounded buffalo, bent on revenge, cannot be exaggerated and would appear to give the lie to the contention that animals do not reason, for in order to attain his ends the buffalo will often resort to strategy that would do credit to a human being under similar circumstances. Certainly, in his attempts to catch up with a tormentor he will generally follow a well thought-out plan and it is at such moments that he will qualify for the distinction of being the most dangerous of animals. His vindictiveness then knows no bounds and often he will carry the feud beyond death. I have known of several cases where buffaloes have returned to a corpse in order to exact further vengeance. Compare this with the elephant, who will frequently bury his victim!

I have often been asked, "Which is the more dangerous, the lion or the buffalo?" One cannot give a straight answer to such a question. Conditions alone determine each case. There are no statistics available, and if there were, they would prove nothing. Buffaloes are far more numerous than lions and are hunted more frequently. It is only natural, therefore, that there should be more accidents with the former than with the latter. But far and away the largest number of accidents with lions have been due to inexperience and foolishness. I am, however, convinced that many more experienced hunters have been killed by buffaloes than by lions. This fact, of course, does not necessarily make the buffalo the more dangerous of the two. My own view is that, given the choice, I would very much sooner shoot it out with an enraged lion than an enraged buffalo. In the matter of speed, the lion has the advantage, but in natural cunning, resistance and tenaciousness of life, the buffalo has it all his own way. A well-placed shot from a comparatively light rifle will, as often as not, prove sufficient in the case of lions, whereas a shot from a heavy-calibre .375 and upwards is almost certain to break down his charge. A double-barrel

shotgun at close quarters is as effective a weapon as one could wish for against a charging lion and I have known of several cases where a lion has been put "hors de combat" in hand-to-hand encounters with man. By contrast, there are several cases on record where the heaviest calibre rifles have failed to stop a charging buffalo in time. I have experienced similar cases myself. A shotgun would be entirely useless, and as for tackling a buffalo in a hand-to-hand fight . . . well, has anyone ever heard of it?

The lion is frequently called "The King of Beasts." "The King of Carnivores" would be more correct and even here his superiority is not unchallenged. My own contention is that deep down in the makeup of every adult male lion there runs a broad yellow streak. One has but to dig deep enough in order to find it. Frequently, when the going really gets tough, the lion will seek safety in flight. This cannot be said of the buffalo, who, to my mind, is the most courageous of animals, and once his animosity has been aroused sufficiently to provoke a charge, no odds are too great for him. In such cases he gives, or asks, for no quarter, but will fight it out silently and courageously to the bitter end. The observations I have made are, of course, based on my own experience. By far the greater part of my hunting has been devoted to the buffalo, and I have no doubt that those who have hunted the lion more assiduously than I have done will not agree with my views.

And now, having said so much in favor of the buffalo in his natural state, I quite expect those who are opposed to hunting in any form to ask, "Why, then, hunt and persecute him so persistently?" The answers are: First: For the same reason that thousands of animals, most of which are completely harmless, are hunted daily everywhere. Man has been a hunter ever and will be always. In hunting the buffalo there is always the element of danger. He is worthy of the hunter's steel and to hunt him successfully requires skill, endurance and courage. Second: He is a most potent medium for carrying diseases that are harmful to man and beast. Third: There are very few, if any, places where the buffalo lives a natural and normal life. Native hunters all over Central and East Africa have increased tremendously, especially during the war years when food was scarce. As the hunting has increased, so has the wounding. In many and large tracts in Africa today the buffalo is a positive danger and menace and frequently innocent persons pay for the misdeeds of the guilty. I am convinced that many hundreds of people are killed yearly in accidents with buffaloes. The true figures will never be known, as a great many such accidents are never reported. There is no doubt that the buffalo, with its inherent offensive nature, has declared war on man, and has become Africa's greatest killer. That he has been driven to this I freely admit. But that he is incapable of exercising discretion is also true. We do not permit disgruntled human beings to exact vengeance indiscriminately—whatever the provocation. Is there any reason why the buffalo should be allowed to do so?

DEATH TOUCHES, LIGHTLY

This was to have been my last day of hunting on the present trip. We were taking a short-cut back to camp from hunting meat when suddenly I noticed the fresh tracks of a buffalo herd. They had been to water during the night and in the early hours of the morning they had made for the distant wooded country. The natives were all in favor of trailing down this herd, explaining that, in view of the intense heat, we might expect to find them under shelter in the forest. Although I had not come out to hunt buffalo, I felt there was a good chance of trailing down this herd and



Previously wounded by native hunters, this bull charged lorry seen in background. It required five shots to drop the animal.

any meat in excess of my own requirements would be very acceptable to the villagers near my camp.

The trail was on, and hopes were running high—prematurely, as usual. For three hours we followed the trail of the buffalo through difficult country before we finally spotted them. They had gone to the far end of the forest and were evidently about to enter another plain when the heat proved too much for them and here at the edge of the open plain, under a cluster of big trees, they had come to rest. They were unaware of our presence and I was able to advance within 150 yards.

The herd consisted mainly of cows, two very young bulls, and two big bulls who were full-grown. I decided to get the one nearest me. There was a heavy heat mirage and visibility, even at such short range, was extremely bad. I was using a heavy .404-calibre rifle and took careful aim for the shoulder, hoping to bring off a heart shot. As the shot rang out, there was a great rush and in the ensuing confusion I lost sight of the bull I had fired at, but knew the bullet had struck home, as I had heard its resounding thud. The next instant the herd was off at top speed, making for the open plain. Both bulls were well up with the herd as they came out in the open, and it was impossible for me to tell which one I had hit. Then, one bull began to lag behind and I felt certain he was the one that had received the bullet. As he offered a broadside target I gave him another shot and this time he slumped to the ground. But now an astonishing thing happened; suddenly a few yards ahead the other bull collapsed in a cloud of dust. I realized at once that this second bull to fall was the one I had fired on first. He had evidently received the slug in the heart, where it was intended, and then had run some distance, as they frequently do, before the shot took effect. The other bull had apparently received a brain shot, to bring him down so suddenly. He was still lying motionless and to all intents and purposes he had died on the spot. The other bull, on the contrary, was still alive and making desperate efforts to regain his feet. As I was not very far from him, I took a light rifle and finished him off with a shot in the brain. No sooner had I fired this shot than the other bull, which I believed to be dead, jumped up and started to cross the plain at a fast

trot. So unexpected was this move that before I could exchange rifles and try another shot, he was several hundred yards from me and I missed him completely.

For the second time in one day an animal which I had believed dead was trying to make a getaway. I determined this bull would not escape. A big pool of blood convinced me that this bull had received a bullet in the chest. I immediately got trackers on the blood trail; the bull was bleeding rapidly and I felt certain he could not last long. A little more than a mile across the open plain was more dense bush, and that was the place the bull had made for. We hoped to come up to the bull at the edge of the forest because I had very nearly exhausted my water supply. The heat was terrific and even if we were to catch up with the wounded animal at the edge of the forest it would be necessary for us to lay up until later in the afternoon, when it would be cooler. At a pinch, I could make my water supply last if we remained inactive during the hottest part of the day. Even so I would be forced to walk several miles without water. The natives, as usual, had indulged more freely than they should have, and their water supply was exhausted. The tracks merged with other fresh tracks and trailing became extremely difficult. It was full an hour and a half before we finally emerged on the trail at the far end of the plain. By now we were all suffering from acute thirst. My supply of water had dwindled to little more than a pint. Although I expected to find the bull dead nearby, I warned the trackers to proceed very slowly and keep a sharp lookout on all sides. I was very surprised when the natives suddenly called a halt. They were not prepared to follow the trail any farther in close country. Ndege, my head tracker, also decided to take no further part in the proceedings. He is an old and experienced buffalo hunter, and the fact of his refusing to go further should have placed me on guard. But in this mass refusal I saw nothing but a planned scheme to get back in order to quench their thirst. The manner in which it was done enraged me so that I threatened to fire the lot. After telling them they could go back home while I hunted the buffalo on my own, I took over my heavy calibre rifle from the gun bearer.

There was now a distinct break in the close bush and

HORNED DEATH (CONTINUED)

for several yards I could see clearly on both sides. I had not gone more than fifty yards before I spotted the buffalo under a big thorn tree. He was standing with his head well down and offered an easy broadside target. I fired for his head. But once again things went wrong, for just as I pressed the trigger the bull lifted his head and the bullet grazed his neck. I was now in full view and in the next instant the bull came out in full charge. At the moment he took off there could not have been more than 75 yards between us, and before I could place my next shot he had reduced this distance to less than 50 yards. I could hear the second bullet strike distinctly and fully expected to see him go down, but the only effect the bullet seemed to have on him was to accelerate the charge. Now only 20 yards separated us, and once again I fired and could hear the bullet strike, but the bull seemed immune to punishment and came straight for me. There was no time to try another shot. At such moments one either thinks very quickly, or one does not think at all.

My training told me there was no point in standing erect to meet that deadly charge. Then I made, I am sure, the most spectacular dive in all history. Headlong, I flew into the grass at my left and before I could touch the ground I felt a violent blow on my right leg. By a miracle I had escaped the head-on rush, but one of the hoofs had actually struck my extended leg. I fully expected the bull to wheel and lift me on one of his horns. To avoid this, I went down flat on my stomach, a position in which it would be very difficult for the buffalo to impale me. It was one of the tensest moments of my life—lying there waiting for the bull to turn on me. But the bull did not turn around. He was beyond the stage of thinking or exacting vengeance. He carried on his charge for another 20 yards, then suddenly collapsed for the second and last time that day.

Both bullets aimed at the charging buffalo had entered the chest. One had pierced the heart, an injury from which he could not possibly recover. Although animals shot through the heart will often run long distances before they finally collapse, I believe that they do so only in a semi-conscious, if not an entirely unconscious state. I doubt whether the bull ever saw me after he had received the bullet in the heart, but he stuck to his course and had I remained erect in his path I would not be writing this now.

Apart from cuts and bruises on my hands and face I was none the worse for this terrifying experience. But long before we had traversed the plain on the trail of the buffalo I was suffering from an acute thirst, and now my lips were parched and my throat burning. Gallons of water could not quench such a thirst, but the pint left in my bottle was better than none at all.

"Water, water," I shouted at the native who was carrying the bottle. He did not seem to be in a great hurry to come to the rescue. Madly I grabbed for the bottle. It was only after I had withdrawn the cork that I realized the bottle was as dry as the parched ground I stood on. The full realization of this awful fact turned me speechless. When finally I had calmed down sufficiently to ask for an explanation the native was quite equal to the occasion.

"We all thought you were dead, Bwana; dead men do not drink water. There was only a little left so I drank it before the others could grab it from me." This was a perfectly logical explanation and there was not much to say to it.

The position now was desperate; we were at least twelve miles from the nearest water and with natives in the state of fatigue these porters were in the return journey would take at least six hours. They were all from the local village

and had no interest in me. My trackers, both elderly men, had reached their limit. After a great deal of discussion, I finally persuaded two porters to go for water. It was after 2 p.m. when they finally set out on their journey. If all went well they could be back by 8 o'clock that night.

The carcasses of the two bulls were heaped together under a small tree in the open plain. All we had to do thereafter was to nurse our feelings and try to master the craving for water. That, at least, was how it appeared at the moment.

Our improvised camp for the night could not be moved to the big trees at the edge of the plain as the natives were too exhausted and thirsty. At the spot where we were camped, some 400 yards inside the open plain, we could find only a few sticks of firewood. With difficulty I persuaded the natives to bring in a few loads. The amount of meat on hand made me feel certain we would have trouble with lions and hyenas in the dark. As I had not expected to be out that night, I had brought no lamps or lighting equipment of any sort. The campfire would be our only means of providing light in case of an emergency and the amount of wood we had was barely enough to keep a fire glimmering for the night. Any demand of importance would exhaust the supply of firewood in an hour or less.

By 7 p.m. it was quite dark. We were thirsty and hungry—hungry in spite of the fact that we had more than a ton of meat on hand. But when one suffers thirst such as we were suffering the best food in the world is unpalatable. By 8 p.m. there was still no sign of the natives we had sent back for water and I had small hopes of seeing them back that night. The more I thought of it, the more I became reconciled to the idea of spending a night out in the open without water, food or cover.

Suddenly there was a loud rustle in the grass quite close to us. The campfire amounted to a mere flicker, but I had earlier persuaded the natives to prepare grass flares to be lit in case of emergency. Quite clearly we could hear footsteps approaching us. Fortunately, I had brought my shotgun along and it was loaded with buckshot. I grabbed the gun and ordered the flares to be lit at once. In a few seconds, two flares were alight and there, not more than 10 yards away, was a huge male lion. As the flames mounted, he gave a menacing snarl and before I could get him in my sights properly he had disappeared.

This lion evidently had followed the trail along which we had carried the second buffalo that afternoon. As the meat had been carried right across our camp, there was the danger that he would stick to the trail until he got to the meat. I have no doubt that but for the timely lighting of his flares he would have removed or carried off the first obstacle in his path—myself.

I had no doubt that our visitor was in desperate need of food and would stand for no interference. I could hear him trampling down the grass in the direction of the meat and knew he would find the meat without having to pass through our camp.

By now, the natives had miraculously recovered from their fatigues! They were anxious to help in any way I might direct. I called for more flares, which were made from an abundance of dry grass.

The fire had again been revived and all eight of us now stood in line with rifles and spears waiting for the next move. Suddenly there was a loud grunt followed by a leap in the grass, then two more loud grunts. Once more I withheld my fire and depended on lighted flares to scare him away.



This young bull had just killed a native hunter. Festering sore near eye explains his bad temper. Sick or wounded buffalo are deadly.

The second flare had hardly died down when we could hear him coming back again. This time he adopted different tactics, keeping up a continuous and vicious snarling. The natives were in a state of abject terror and it took me all my time to prevent them from lighting and burning up all the flares at once. Two more flares were thrown in the direction of the animal, but it was impossible for me to sight him properly and once again he moved off slowly.

It was quite obvious there would be no peace that night until the lion was shot dead or had appeased his hunger. I was in favor of the former and determined to get him the next time. I instructed the natives to wait until the lion was actually on the kill and feeding and then to light four flares, instead of two. I felt certain that once the lion had started to feed he would not leave the kill so quickly and the light of two additional torches would help me sight him properly. But the next time he came the snarling had increased in intensity and before he was anywhere near the meat all four flares were burning brightly. The natives were taking no chances! This completely upset my plans, as the lion once again disappeared in the dark.

The natives were now scared completely out of their wits and I feared they would scatter. Once again came a series of grunts and snarls and footsteps in the dark. The lion had become so menacing that I expected to see him land in our midst the next instant. I fired in the direction of the sounds. There was a violent rustle in the grass, then all was silent. For five minutes there was silence, then we could hear the footsteps receding. For fully thirty minutes after that there was silence. Either the lion had got off with a helping of meat or I had wounded him so badly he had decided to abandon further attempts. I managed to persuade the natives to light more flares and accompany me to the meat pile to see if it was still intact.

We had hardly advanced five yards when there was a

violent rustle in the grass right next to me. Luckily, the brute was only making a quick getaway. Twice more during the night I was compelled to fire at an imaginary target in the dark to keep the animal away. At daybreak, as a gesture of contempt or respect, I do not know which, he stood up and roared loudly. Our night of terror was over.

By 8 a.m. water arrived in camp. The two porters had walked until darkness overtook them, then completely lost their way and spent the night in a tree. During their long walk and their enforced stay in the bush overnight they had helped themselves freely to the water they were carrying, but what they brought was sufficient to help us through until we ourselves could reach the water hole.

THE SACRED BULL OF KAFUVU

I had arrived at my present camp some six weeks earlier on a two months' holiday which I intended to spend hunting buffaloes. Buffalo hunting had become a specialty with us and Ndege favored this area. That was good enough for me. News of my arrival spread quickly to several native villages in the neighborhood. Owing to war conditions there had been a great shortage of foodstuffs, especially meat, and the advent of a European hunter caused quite a stir, amongst the native population. I was soon surrounded by a motley crowd of native hunters, all anxious to take a share in the hunting.

I explained to the Jumbe (head of the tribe) that buffalo was what I had come to hunt and what I wanted them to show me. The old man promised me all the help I might require the next day.

Early next morning a dozen or so men of the local community turned out—and I was given the "run-around" for fully thirty miles. I saw plenty of game, but, apart from a few old tracks, there was no sign of buffalo. Ndege, my head tracker, explained that he had seen plenty of buffaloes

HORNED DEATH (CONTINUED)

on the Kafuvu River, which was south of my camp, but the local guides had brought up to the north.

After the villagers had left camp that night, I told Ndege, "Those men are lying to us. For some reason they do not wish to help us hunt buffaloes. Tomorrow you will take me to the place where you saw the buffaloes. Now you go to the Jumbe and tell him I do not require any more of his guides—only porters to carry in the meat."

Later that night Ndege returned, accompanied by the Jumbe. "I have come to tell you, Bwana, that only a few men are willing to accompany you tomorrow," the Jumbe said. "They are mostly new arrivals. My own men refuse to follow you where you are going." This was a strange turn of events. I countered, "Do your people think that I am not competent to hunt the buffalo?" For a while the old man thought things over, then said, "I will explain why my people refuse to go on the hunt tomorrow."

"You see, Bwana," began the old man, "in the hospital across the road there is a 'toto' and he has been there for several weeks. That young man's father was the Sultan of this district. For a long time the stream near his village was honored daily by a great buffalo bull. This animal harmed no one, but came only to drink at the stream, then returned to the forest. The 'Mgana' (witch doctor) discovered the reason this animal was so different from the others was because the spirit of the dead sultans had gone to rest in his great body. We all know this and we believe it. One day the evil spirit entered into the Sultan and he decided to kill the buffalo. He fired at the harmless beast. It was only natural that he did not succeed in this evil attempt and while he was preparing to fire another shot the buffalo descended upon him. He was killed instantly. This happened only ten months ago."

"Two months ago the Sultan's son returned from school; he is a youth of fifteen. He went to pray at the spot where his father was killed. The buffalo descended on him. The son was tossed two times and suffered terrible injuries, but by the Grace of God, no limbs were broken and his wounds have now healed completely. You will understand now why my men will not accompany you. If the evil spirit should guide you to this one animal and harm should befall him, we will all suffer as a result."

A typical African superstitious tale. I fully believed that a buffalo had killed a sultan and that subsequently his son had been attacked by a buffalo—not necessarily the same animal that had killed the father—but I was not going to let a stupid story interfere with my program. On the contrary, I felt that the buffalo, assuming he was the same one in both cases, was a dangerous beast and should be destroyed before he could do more damage.

In view of the story, I informed the old man that I did not expect him to persuade any of his people to participate in the hunt. I would take my own trackers and would welcome any assistance of the natives in the village.

The next morning only four natives showed up and they made it quite clear that, apart from carrying my kit to the Kafuvu, they had no intention of accompanying me on the hunt. By 10 a.m. we were on our way to Kafuvu, ten miles from my camp.

On arriving at the Sultan's village I found that the African bush telegraph had done itself full justice and the entire village knew I had come to hunt the "Sacred Buffalo." The new Sultan himself was on the scene and made it clear that if I intended to interfere with the big bull I must look for no assistance from his quarter. Other buffaloes, yes, I could

shoot as many as I liked. All the natives knew the big bull and would keep me informed to avoid any possible mistake. I agreed that if I should encounter the big bull and be informed in good time I would not molest it—a straight promise, which I intended to adhere to textually. But mentally I made the reservation that, should I meet the big bull, I would make it my business to have the cards stacked so he would be dead long before I was warned!

Early next morning some thirty natives rolled up at my camp. The leader of this gang set off in a northern direction and I knew he was taking me away from the direction where the big bull might be found. I called on him to halt. I insisted that he turn to the south and assured him, as I had the Sultan, that no harm would come to the big bull if they kept me informed. This satisfied him and we swung back south.

Things were working out according to plan; the porters were keeping up a loud conversation all the way which was exactly the excuse I had hoped for. I had previously explained to Ndege that as soon as we struck buffalo country the porters should be ordered to remain well behind us for fear their noise and movement would interfere with our chances of trailing the animals. By keeping the porters well behind us I figured that, should we be lucky enough to catch up with the bull, I would be able to attend to him long before the porters would be aware of the fact. With the prospect of catching up with a herd at any moment, the porters were quite satisfied to remain in the background.

For more than a mile we stuck to the trail and then the herd was spotted taking shelter under a large tree, where I examined them closely. They consisted mainly of cows and calves and a few young bulls. I did not expect to find the big bull in this or any other herd. He was, I believed, an old bull that had been turned out of the herd and, at best, would be accompanied by one or two others in a similar plight; but more likely he would be on his own. I brought down a young bull nearest to me with a slug in the neck. The herd ran for a short distance then turned to see what the trouble was about. The porters begged me to shoot again, but this I refused to do as I realized a surfeit of meat would interfere with the subsequent hunting. The meat was carried in with the usual rejoicings.

It was decided that I would not go out the next day, but the two trackers would go down to the river early and check up on the drinking pools. I was not surprised when my trackers returned before noon to report they had trailed the big bull to his lair that morning. Ndege and Abeli, both



The sacred bull of the Kafuvu. Natives gave Burger "run-around" before he ran down this magnificent trophy.

experienced buffalo trackers, assured me that this was one of the biggest bulls they had ever seen, with a pair of magnificent horns, to boot.

Early the next morning the porters were again at my disposal. Ndege had instructions to find the big bull and to waste no time on any other tracks. I soon heard the familiar whistle. Ndege was on the trail. The porters were told to remain well behind, as they had done on the previous occasion, and to follow me and keep well away from the trackers. This time there was no difficulty in persuading them to fall in with the scheme. In this manner the trackers were left freedom of movement without observation from the porters. It was fully an hour before I heard the warning whistle again and saw both trackers go down flat on their stomachs. The porters were 100 yards behind me and I immediately signalled to them to go to cover.

Up to now I had seen no sign of the buffalo, but Ndege pointed persistently at one spot. Suddenly a movement caught my eye. The bull was lying under a tree, but was completely covered by grass and short scrub, and the heavy shade made visibility extremely difficult. He was lying down, but not asleep, and so far he was still unaware of our presence. In the position he occupied he offered a most difficult target from my station. With the possibility of arousing the suspicions of the porters who, I felt certain, would shout out as soon as they identified the bull, I realized there was no time to waste in maneuvering for a better position. Without further ado I fired for the head, hoping to bring off a brain shot. But as my shot rang out, the big bull jumped to his feet. Somewhere on that big carcass the bullet had made contact, but it could not have done much damage, as he now stood up and glared in my direction.

In reloading slowly and at the same time avoiding a fast movement that might attract his attention, I lost more time than I would have normally, but I felt quite safe as I was under perfect cover and did not expect the bull to move before I could fire the next shot. The animal's truculent attitude had apparently scared the other tracker, who was quite close to Ndege and, as I was reloading, the man took off for the nearest tree on his left. Ndege's position now was desperate, for although the bull had not seen him, he was almost in the direct line of charge. Abeli was then quite safe, as the tree he was making for was close by and he could get out of reach before the bull could catch up with him. For Ndege it was not so easy, as he had got a later start and the tree he was making for was farther away. The bull was gaining rapidly on him. This sudden turn of events had placed me at a complete disadvantage. Had the bull remained stationary I could easily have placed a second shot on an exposed target. In rushing toward Ndege he had got behind a cluster of bushes some twenty yards in front of me. With this obstruction, and a rapidly moving target, there was no hope of placing a shot. All I could do was run at top speed in order to clear the obstruction. As I emerged on the far side of the cluster of bush the distance that separated me from the bull was no greater than that between him and Ndege, who still had fifty yards to run before he could reach the tree, a distance he would be hard put to cover in time. Now I had a clear field of fire and I fired for the shoulder. As the bullet struck, the bull bellowed loudly, changed his course and came straight for me. Only then did I realize what a tremendous pair of horns the animal carried. Normally, in a head-on charge, the best place to fire at is the left shoulder, but as the bull came for me with his head down, both shoulders were almost completely covered by the immense horns. As I was about to try for a shoulder shot, the great skull rushed into my sights. In the next second I witnessed one of the most spectacular sights I have ever seen in buffalo hunting, for as the bullet

struck his forehead his knees seemed to give away and he turned a complete somersault. In a little more than a second he was back again on all fours. But now he was completely dazed and started running away from me—in the direction where Ndege was still struggling to get up the tree. This was no longer a charge—just an aimless trot. Once more I fired as he presented a broadside view, but still he kept moving forward aimlessly. Now he was only a few yards from the tree where Ndege had at last managed to reach safety and he started to totter like a drunken man. Finally he came to a stop and stood glaring at the tree where Ndege was. The "Sacred Bull" was definitely on his way out, and my next bullet brought proceedings to an end.

As a trophy the "Sacred Bull" was a superb specimen; but if I wanted to collect him we would have to carry him out ourselves, which was quite out of the question. The local natives remained in their hideouts for a long time and when they finally were persuaded to come to earth, terror was written all over their faces and they refused to touch any part of the carcass. So, at the spot where this legendary brute fell, he remained—at the mercy of the vulture and the hyena.

The reception I got on my return to the village that afternoon made it quite clear that I was an unwelcome guest and that same evening I returned to my main camp.

JIMMY AND THE FRIENDLY TREE

Jimmy had recently returned from England, where he had finished his engineer's course and subsequently joined the local African firm which was doing war work. His father was the managing director of the property where I was also doing contract work and, during my spare time, helping to implement meat supplies for the native laborers. Jimmy had come out with me on several occasions and on his first outing, a day on which I was notoriously off form, I had fired at a buffalo not more than 100 yards away, and missed. Hardly had the report of my shot died down when there was a second report and I saw the buffalo collapse in his tracks. Jimmy had enjoyed beginner's luck and with a light .256 rifle he had placed a perfect kidney shot. It remained only to finish off the bull with a brain shot and collect the meat. That initial success went completely to his head and since then he had adopted an air of superiority that was difficult to endure. For weeks he talked of nothing but buffalo and the way to "knock 'em over." "They're not dangerous," he would say, "they're just dead-scared and unless you can knock them over at a thousand yards you may as well call it a day."

Jimmy senior, however, did not approve of all this and told the young man he was on no account to go buffalo hunting on his own and when hunting in the company of more experienced men he would have to follow their advice or leave the business alone. As a result, I had this packet wished on me every time I went hunting. What was worse, I had also received instructions to see that no untoward incident should happen when Jimmy senior's seadstrogt offspring accompanied me. His ill-chosen remarks that I was "scared stiff" and many other tantalizing observations had been getting under my skin for some time and finally brought me to the boiling point with his uncalled-for outbursts. I was all set to strike out in a different direction. The buffaloes had entered wooded country and under the circumstances I did not care to look for trouble and unpleasantness. With a warning to Jimmy to watch his step, I walked off. As I walked away the trackers and spotters all lined up behind me and started to follow me. I explained that for this occasion I was going to leave the buffaloes to Jimmy while I looked for something else. They would have none of it, they were not prepared to follow a greenhorn in difficult country. Finally I had to give in to them. I ex-

HORNED DEATH (CONTINUED)

plained to Jimmy what it was all about and told him I would come along merely as a spectator.

We were soon on the trail of the herd and before long we put them up. We were in close, wooded country. The animals became perfect targets. Jimmy raised his rifle and as a big bull came into full view he fired. He registered a hit. Before he could move out of sight, a second shot rang out. But this time Jimmy missed and the bullet sprayed sand in front of the bull, which disappeared from view in a second. The hunt was either over or just beginning.

"Well, old-timer," I said. "What's the next move? That buffalo is wounded and cannot be left at large. This is where we novices consider buffalo bad medicine. Perhaps you would like to show me how the fundis (experts) go about it?"

With an air of bravado, he assured me that he was "going to see the business through." To this I readily agreed.

I had told Jimmy that I would shoot only in case of emergency. Trailing was slow work as all the natives were nervous and there was very little blood on the trail. We were coming now to more open country and only a mile or so ahead lay the open plain. I felt certain the bull was hiding in that intervening space behind one of the numerous clusters of thick bush in our line of advance. The nearest cluster, in front of Jimmy, was not more than a hundred yards away. We decided to encircle the cluster and not approach nearer than seventy yards. Jimmy would stick to the left side while I circled around the right. We went a few yards then I lost sight of him as he disappeared behind the cluster. Then it happened! From the other side of the cluster I could hear the natives shouting loudly and within a few seconds I could see the first of them running at top speed towards the nearest tree. As I doubled back on my tracks I saw more natives making for trees. At last Jimmy came into view and then—the buffalo!

In walking around the cluster of bush, Jimmy had got well ahead of the natives and when the bull decided to take off Jimmy was the man nearest to him and this, of course, made him the immediate object of the charge. No sooner had he realized what had happened than he set off at full speed for the nearest tree. Unfortunately for him, this tree was little more than a thorny sapling. There were no branches strong enough to support his weight, but the trunk was large enough to enable him to climb out of the bull's reach.

Jimmy was hanging on grimly for life, his legs and arms entwined around the trunk of the tree, while below the buffalo menaced him. The bull did not notice my approach and this allowed me to come quite close and take careful aim. I placed a shot in the animal's neck and without further move he slumped to the ground. But even though the bull went down in a heap Jimmy kept hanging on for dear life until I came up and assured him all danger had passed. When finally he came down to earth he presented a sorry spectacle, as he had thorns imbedded in almost every part of his body.

Jimmy's career as a buffalo hunter had come to an abrupt ending and for the next few weeks he talked of nothing else but the terrifying experience he had been through.

ACTION ON THE GROUND

During the second great war I had opportunities to take out young soldiers on short trips and invariably they would ask to be shown buffalo, elephant and lion. Elephant and lion are not always easily encountered, but I generally man-

age to stir up the odd buffalo, and frequently I had much fun at the expense of some of these lads. Many of them were excellent shots on the target range, but on game they fell far short of expectations and I often witnessed a dissipation of ammunition—hard to procure during the war years—that almost moved me to tears. But there was one morning when the dissipation of a thousand rounds per second would have been music to my ears. On this occasion I had taken out two young officers of the R.A.F. and, as usual, they wanted "big stuff."

Shortly after sunrise we spotted an immense herd of buffalo. We maneuvered so that the herd was about 500 yards from us. As they moved slowly in extended line I had a good opportunity to select a worthwhile specimen. They were coming in closer to us and this was good because it reduced the range considerably and the bull I had selected showed no inclination to become mixed up with the rest of the herd. Suddenly the head of the column started to wheel around in our direction, describing a half-circle around us. I was distinctly puzzled and decided to wait for a moment longer to see what they would do next. They came to a dead stop and the entire column turned and faced us. The herd was now about 300 yards from us and the obvious thing to do, in the light of subsequent events, would have been to open fire. But I have always disliked head-on shots on buffalo, and the range was rather long for the lighter rifles of my companions, so I purposely delayed shooting in the hope that the big bull I had selected would turn and present a broadside to me. My companions were anxious to start the ball rolling, but I stressed the range and advised them to hang on for a little while longer while I tried to reduce the distance between us and the animals.

I had hardly finished talking when, as though in response to a command, five hundred buffaloes lowered their heads and charged straight for us! This was one of the most terrifying moments I had ever experienced on the buffalo trail. We were almost entirely encircled and every one of the buffaloes seemed to have but one object in view—to reduce the distance between them and us in the quickest possible time.

I know all about the buffaloes' "curiosity closeup," with the subsequent dash for safety as soon as they have satisfied their curiosity. Also do I know the wild stampede when a herd is aware of danger, but unable to determine its source or direction. In such cases they run, often with their heads well up, until the object of their curiosity or alarm is identified and then will suddenly turn off at a sharp angle. But this herd was not actuated by either curiosity or alarm. They had watched us intently for some time before they took off in our direction. This was a deliberate and determined charge; they were coming straight for us, heads well down! We were watching a mass demonstration of the fear-inspiring spectacle I had witnessed on so many of the occasions I had had to deal with individual charges.

To turn a stampeding herd is not very difficult and well within the repertoire of every experienced hunter. A brisk movement, the waving of a hat, a random shot at the leader—any of these artifices, if resorted to in time, will serve to turn a herd, irrespective of whether their approach is prompted by fear or curiosity. But this was different; we were face to face with a situation completely foreign to me. The bag of experience was empty! There was no trick I could pull from it that would help us in our dire predicament. There was no leader whose course could be diverted; every single member of that herd was acting independently and seemed to have made up his mind to get at us regardless of what the others might do. To run away from this avalanche would be madness and, at best, would only delay the inevitable for a few seconds. The herd had thundered to a little more than 100 yards from us and still there

was no sign that one of them would take the lead and change their direction. The natives, petrified by fear until now, suddenly found use for their legs and as they started their wild dash for safety, a heaven-sent inspiration came to my rescue. "Stand by, stand by," I shouted at my companions, "and shoot for the end of the column." I fired immediately on the bull at the extreme end of the line. I was using a heavy calibre .404 rifle, with soft-nose ammunition and as the bullet hit the bull's shoulder he was thrown from his course and, unexpectedly, he followed the direction the impact of the bullet had prescribed for him. At that moment two more shots rang out and then the line started to straighten out as though a giant magnet were drawing the herd in the direction the wounded bull had taken. We kept up a rapid fire until our magazines were empty and by the time we had again reloaded the tail end of the column was dashing past us—less than fifty yards away!

It was fortunate that I had loaded with soft-nose ammunition as, on making contact, the bullet had mushroomed and this helped to impart full force of the load. That end bull was thrown off his course so suddenly that the rest of the herd must have thought he had turned off deliberately. Blindly they had followed him! A hard-nose bullet probably would not have given a similar result as it would most likely have penetrated without imparting the full shock, or, it might have dropped the bull in his tracks. In neither case would my shot have contributed much towards turning him off his course. In complete and abject despair I had pulled a ripe plum from the empty bag of experience.

Just what it was that had prompted this herd to stage such a determined charge is a mystery to me. None of the cows or calves had been killed or wounded. Had such been the case it would have offered a possible explanation, as I have heard of cases where a small herd had resented injury to one of its members and a charge had resulted. But for a large herd's adoption of such tactics I can offer no explanation.

By late afternoon we had bagged two bulls which were loaded on our truck. I was sitting looking at the horns of one of the big bulls in the interior of the moving truck when suddenly there was a shouting and a screaming all around me. As I got to my feet I was just in time to see the black mae of a buffalo bull charging down on the truck. He was not more than five yards from us and at that moment a shot rang out. As the bull "took it" there was a spasmodic jerk of the great frame, then a sickening crash as a headlamp was smashed. The impact of the infuriated bull, rushing head-on at full speed, had also brought the truck to an abrupt stop. Now there was another report of a rifle and again a violent bump as a mudguard was staved in, and all this time I was shouting frantically at the gun-bearer to hand me my heavy-calibre rifle. As I reached for it there was another violent bump; this time it was the radiator that received the full benefit of the vicious lunge. At that moment two more shots sounded and the bull rolled over dead.

Examination of the carcass showed that this bull had been wounded previously by native hunters and was suffering from a large festering wound in his side.

My fier-companions had witnessed two extremely rare occurrences in buffalo hunting and those on their first, and only outing. The experience made a deep impression on them.

A PACKET OF SHOCKS

I have written much about narrow escapes and awkward situations during encounters with buffaloes, but when I come to review my adventures on the buffalo trail I must confess that the greatest shocks have not been experienced while

actually shooting it out with the "bad boys." My genuine spine tinglers have always sprung from unforeseen circumstances. When one goes in to shoot it out with a wounded buffalo or prepares to face an expected charge, he faces a known situation. One keeps cool, calm and collected; one adjusts oneself to a recognized situation, for to do otherwise will almost certainly lead to disaster. It is when the completely unexpected happens that the nerves are liable to play up.

During one October, away down on the Kafuvu River, we got on the trail of a big buffalo herd grazing out in the direction of the forest country. The trail of this herd had already led through two or more dense grass patches and now only one patch lay between us and the forest. The patch of grass stretched for fully two miles across the plain and was a mile or more wide at its narrowest point. Trackers circled the patch and reported that the herd had emerged from it on the other side. The quickest route would be directly through the grass patch. As I did not expect to use any of my rifles before we reached the forest country, I handed them over to my gun bearers and set out at the head of the trackers and porters. I was walking ten yards ahead of the nearest gunbearer, head down and deep in thought. In one instant I all but strode onto the back of a buffalo, fast asleep in the long grass! I do not know who



The author with a favorite pet. Burger, a noted hunter for many years, now is engaged in a mining enterprise in Rhodesia.

HORNED DEATH (CONTINUED)

had the greatest shock—the buffalo, the porters or I. The buffaloes bolted off. The porters left the spot in a hurry. A grandfatherly old fellow who had complained all morning that the going was too hard for him was at the head of the flight and busy setting a new record for the 100 yards.

A shock such as this is only temporary and in a few minutes we were all back on the trail, the usual bantering and leg pulling bringing comic relief to a tiring job.

The herd entered the forest and I selected one of the big bulls. I did not allow sufficient time and care in aiming. As the shot rang out the herd took off at top speed. I did not hear the bullet strike and felt certain I had missed. The trackers were equally certain that the bull had "taken it." We trailed for nearly a mile before one of the trackers picked up a dry leaf on which there was a mere speck of fresh blood. This indicated a flesh wound and experience has taught me that a lightly wounded animal will rarely charge; will even go to a lot of trouble to escape added injury.

The herd was now making for the patch of grass in which we had had our alarming experience earlier. The trail led us to within a few hundred yards of the extreme edge of the long grass and in that intervening space the herd was hiding, as they had not shown up in the open plain beyond. We had hardly come to a stop when I heard the grass ahead of me being trampled down. The herd was less than twenty yards in front of me. I realized I had gone too far without making sure all was clear on the flanks. I made up my mind to retreat. As I turned around I looked straight into the face of a bull not more than three yards on my right. In the next instant, before I could raise my rifle to my shoulder, the bull whirled around and set off at top speed in the opposite direction. I resumed the business of breathing!

On one occasion a friend and I set out early in the morning for a swamp, some three miles from home, in search of impala. We soon came across a small herd of impala, which picked up our scent and ran into the grass. I started to follow the trail, well ahead of my friend, when suddenly there was a violent commotion in the grass, right at my side. I was horrified to see a pair of buffalo horns coming straight at me. At that moment they were not more than five yards away. I had not even started to raise my rifle when a shot rang out from behind me. Instantly the mass of buffalo cow sprawled right at my feet.

I immediately bent forward to examine the carcass to discover where the timely shot had been placed. As I did this, there sounded a loud "BAAH" right behind me and in the same instant I received a violent bump in the buttocks which sent me headlong across the carcass of the cow. This unexpected attack bewildered me completely. As I turned around to face the inevitable I looked straight into the face of a buffalo bull—barely one month old!

The cow had dropped out of the herd to rest the calf in the long grass and, unknowingly, I had walked into the hornet's nest.

That calf was an astonishing little fellow, for with the death of his mother, he transferred his affection to us and followed us all the way back to camp. His love for us grew until finally it was impossible for either of us to move without having him at our heels. We kept him on a diet of cow's milk, but after a few weeks he developed stomach trouble, from which he died.

Of all the shocks I have had on the buffalo trail, there

is one that always produces a queasy feeling in my stomach when I think about it. This incident happened some years ago on the Ruaha River. To get a better view of the surrounding country Ndege and I had mounted a small hill. I was busy adjusting my field glasses when I was jerked sharply by the shoulder. "Nyoke, Bwana," (snake, sir) cried Ndege. I looked down as the head of a big puff adder whipped past my knee. He had missed me by the fraction of an inch and I actually looked down his wide open mouth as he struck.

I had no serum or other antidote with me and was at least eighteen miles from camp. Only the two trackers were present and they were by then pretty well played out. If that snake had struck me, the two natives, tired as they were, could never have carried me back to camp. Even had they succeeded in doing so I would have had to travel at least seventy-five miles to the nearest doctor, by which time I would have been beyond all human aid.

FAREWELL

One afternoon I bade farewell to Ndege and the many others of my hunting crew. As my truck pulled out and I looked back on the small group that had gathered to wish me Godspeed, the memories of the past crowded my mind and I felt sad to think that here, indeed, was the end of it all. I knew that I could never describe adequately the sense of comradeship that had grown amongst us in the wilds. Their loyalty and devotion to me had made my occupation a comparatively safe and easy business. But now I was returning to civilization for the first time in thirty years. Congo, Ubangi, Sudan, Uganda, Kenya, Tanganyika—they all belonged to the past. Any future telling of my adventures in those countries would lack campfire, to lend charm and romance to the occasion, and the drone of native voices discussing the day's adventures. The realities of the life I was leaving behind could be appreciated fully only by those who have themselves lived that life.

Farewell, Ndege; farewell my other faithful friends. Happy hunting wherever you may be; it is unlikely that I shall ever take part in your adventures again.



The record—A Magnificent Trophy!

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Questions and Answers

Q. What is the only poisonous mammal?

A. The duck-bill, or platypus, of Australia and Tasmania. In this peculiar, primitive mammal, the adult males have a one-inch long spur on the heel of each hind foot from which they can eject a fine stream of venom, the effects of which are comparable to snake-poisoning.

Q. What animal cannot turn its head sideways?

A. The elephant, whose neck is so short in proportion to its thickness that no side-bending of it is possible. If an elephant wants to see farther to one side, it has to turn its whole body.

Q. What large animal gallops like a hobby horse?

A. The giraffe, which has a gait different from that of all other animals. When moving fast it uses the fore and hind limbs of each side together, combining this pace-like gallop with a rocking, leapfrog-like motion. Again, when walking, the giraffe "paces"—that is, moves the two limbs of each side together, rather than the right foreleg and left hindleg (and vice versa) as is usual in most other animals. The word, giraffe, is of Arabic origin and means "one who walks swiftly".

Q. What animal often turns a somersault as it comes out of its burrow?

A. The warthog, of Africa, which has the curious habit of turning a back-somersault onto the top of its burrow as it comes out. This it does presumably as a means of dodging and confusing any enemy that might be lurking about the entrance to its home.

Q. Do any mammals have a different number of neck vertebrae from the usual seven?

A. Yes, but only three. First, there is the manatee, a species of sea-cow, which has only six cervical or neck vertebrae. Secondly, there are two species of sloths, one of which has six neck vertebrae and the other nine vertebrae. All other mammals, whether they be short-necked like the elephant or long-necked like the giraffe, have seven cervical vertebrae. In some forms, such as whales and jumping rodents, where there is shock on the backbone, the vertebrae may fuse or grow together.

Q. Is there any kind of deer in which the females as well as the males carry antlers?

A. Yes, but only the reindeer or caribou.

Q. What are the largest and the smallest land mammals known?

A. The largest land mammal is the African elephant, adult males of which may attain a shoulder height of close to twelve feet and a weight of eight tons. The smallest mammals are certain species of the pygmy shrew, in which the total length including the tail is only about three inches and the body weight may be as little

as 1/12 of an ounce. Thus the largest mammal may weigh over three million times as much as the smallest!

Q. Can an animal live without a brain?

A. Yes, but only in a subconscious condition. Its only responses are reflexes, which are controlled by the spinal cord and do not require a brain. A de-brained animal will swallow and digest food if it is placed in its mouth, but it does not know enough to pick the food up.

Q. Do domestic cats ever have a hanging ears?

A. Yes, but only two such cases are known to science. Both were of white Angora cats. For a long time it was thought that there was a breed of such lop-eared cats in China, but it is now known that the condition is only a rare form of individual variation.

Q. Can animals of all kinds be imported into the United States?

A. No, indeed. Many kinds of beasts and birds carry the germs of communicable diseases, and such animals are denied entry. Some of these "not wanted" species are the European rabbit or hare, brown rat, black rat, house mouse, flying fox (or fruit bat), mongoose, English sparrow, English starling, green finch, chaffinch, myna, and even the feathers of wild birds. Again, zoo animals, particularly hoofed mammals (which may transmit hoof-and-mouth disease) are quarantined at the Government Station at Athenia, New Jersey, before being permitted to enter.

Q. What causes a "waltzing" mouse to waltz?

A. This condition is the result of a defective development of the inner ear which prevents the mouse from walking or running in a straight line. All "waltzing" mice do not waltz, only those with the defective sense of balance.

Q. Which came first, the hen or the egg?

A. In one sense, the egg. Eggs were laid by fishes and by reptiles for millions of years before birds came into existence, and the domestic hen is a very recent evolutionary product compared with eggs.

Q. Can any animal change the color of its eyes?

A. Yes. In certain families of East Indian ant-mimicking spiders (the *Myrmarachne*, for example), the spiders are able to change the color of their eyes at will—from dull whitish to black or vice versa. The change may be made either slowly or rapidly, and may affect either both eyes or only one eye, with the result that one eye may be black and the other white at the same time. The change in eye color is caused, not by any change in pigmentation, but by a peculiar cone-like formation of the inner or hinder ends of the eyes, which may wave from side to side, thus causing the observer to see into them from different angles.

I CAPTURED THE FIRST OKAPI

(Continued from page 11)

the water gathered from the continuous passage through perennially wet leaves, inside because of the perspiration with which my entire body was drenched and by the blood oozing out of more deep scratches than I could count.

It took me quite some effort to lift up my feet, so much mud had coated my boots, the wonderful impermeability of which was proved also by the way they jealously held within every drop of the pints of water poured in from the top while I had crossed a couple of icy, hip-deep little streams.

The strap of the big camera on my chest had allied itself with all other straps in an effort to saw through my poor neck and shoulders. I just had to take them all off for a while. Only, to do so, I had to remove my helmet. But when I tried to lift it, there were further complications. This elegant headgear, being made of khaki cloth stuffed with compressed banana leaves, was light, pleasant to wear and perfect protection against the most broiling sun. Now, having bumped against so many branches and trees and received so many showers from the wet foliage, it was reduced to something softish, pulpy, to a sort of melancholy, clammy, badly-cooked omelette which clung to my head and hair and ears. All I could get off with an infuriated gesture was a small slice of the unappetizing dish, and it took me some time to get rid of the balance, my only comfort being that the jungle roof would protect my head enough to avoid the added pleasure of a nice little sunstroke.

A little later we started again, and again we went on for interminable hours, only every now and then stopping for one of those blissful rests.

When we finally returned to camp, the results of that first day of my Okapi quest were not what I would call brilliant, to say the least. The pygmies had shown me dozens of fresh footprints. Let alone watching and photographing Okapis, I had not been able to gain even a lightning glimpse of one of them—the noise of our approach having frightened them away every time just before we reached the spots where all indications clearly showed that one or more of them had been feeding or peacefully bathing.

As for my elegant, shining toilette of the morning, it could be compared only with the disgraceful appearance of the omelette-helmet, which now proudly crowned the head—and shoulders—of the Wambuti chief. Exhausted, in rags, covered with mud and blood and insect

bites, I was a walking catastrophe from head to foot. And it took the combined, repeated efforts of four natives before I could part with my boots, which apparently had decided to become an integral part of my anatomy.

Needless to say, that first encounter with the jungle taught me a lesson. Even though I already had a fair number of years of African exploration, I had never before had to work under such uniquely difficult, special conditions. Now, with a day of march and some hundred miles of driving, I went to the nearest little town. There I managed to obtain new clothes of a material so strong that not even the thorns could tear it—not always, that is. I got myself a new helmet of solid rubber, which would protect my head and maintain its form. Boots I discarded completely in favor of tennis shoes, of which I bought a dozen pairs. As for photographic paraphernalia, I cut them down to one—and only one—light, handy and easy-to-use Leica hanging from my neck and held close to my chest by a strong elastic band around my torso.

These drastic measures improved the situation enormously. Gradually, I grew accustomed to the heat and humidity, and trained to the strain of the long marches. Helped by the sneakers, little by little I learned to give a creditable imitation of the pygmy way of silently slipping through the vegetation. Before long, I even managed to become almost as good as them at remaining immobile in ambush, despite the millions (it seemed) of ants of all sizes, of other insects of all kinds crawling all over my body—all of them stinging, biting, pricking like nobody's business.

So, step by step, I succeeded in approaching nearer and nearer to more and more Okapis, in gathering new facts about their mysterious, totally unknown habits, even in taking a few rare pictures of their life.

Week after week, month after month of incredibly hard, infinitely patient work and of unending marches went by. But all these efforts produced results. And they led me to the day I have mentioned in the very beginning of this story, the day when Toto's path and mine joined into one, and we began a beautiful friendship.

* * *

On the very early morning of that day—it was the first of September—when the hot sun had just started warming the night chill off the infinite expanse of the jungle forest, Mother Okapi got lazily up from the bed of perfumed

leaves on which she had spent the night with her small one. Small, by the way, is purely a figure of speech. For, although only a few weeks old, Toto was already three feet high at the shoulder and four at the head. But, curled up near that mother of his, as tall and strong as a fair-sized horse, he looked like a ball of beautiful shining hair, red and black, white and brown.

After a while, Toto also got up, drowsy from the abundant breakfast he had just finished. And, like every morning, he made a few steps toward the tortuous exit of the green cavern of vegetation, as if he intended to precede his mother outside. But she, like every morning, stopped the motion with a sharp "No". How she said this, or anything else, to him, I frankly do not know, for the Okapi is similar to the giraffe not only in the form of the head, but also in the peculiarity of being unable to emit a vocal sound of any kind. Still, in spite of this, they know how to talk among themselves, no fear!

Once more, as I was saying, Toto heard that "no." Outside one couldn't go, not until one had become big and strong enough to gallop with his mother. Because "outside" there were the *tshewi*, the big leopards so ferocious; and the *mboko*, the jungle's pygmy red buffaloes so nasty—and beware if they found a young one out by himself! Without counting all other dangers, so numerous and dreadful that it scared (or it should have scared) one even to think of them.

Meanwhile, with her blue tongue, a foot and a half long, Mother was giving a last licking to Toto, for fastidious cleanliness is the Okapi's most characteristic trait. First of all, she had licked his small giraffe-like head where already two tiny horns covered with skin were appearing, and which was crowned by two enormous red ears bordered in black. Then the stiff, short mane, which ended in a little tail, full of importance. Then the black back, the red sides, and the silverish belly which resembled that of an antelope. Finally the plump thighs striped in glossy black and snowy white in zebra fashion, and the big, thick legs which looked as if made of hard wood and wearing immaculate white stockings with an anklet of jet.

At this point the ears of Mother Okapi, as big as a loudspeaker and even more sensitive, must have picked up some infinitesimal, unpleasant noise, for suddenly they began to point at attention toward one direction after the other, while her big eyes revolved, each one on its own account, trying to pierce the green wall and to discover the source and cause of that disturbing sound.

A few seconds of silence, of absolute immobility, followed, during which Toto concentrated all his energies in a

not-too-successful attempt to imitate those so fascinating maneuvers of eyes and ears. Then the noise became distinct. A slow crackling of wood. An even slower but continuous rustling of leaves. A great mahogany or a monumental palisander, mired by old age, was about to fall. This was the only kind of danger really feared by the Okapi mother, for she knew by instinct that, when those giants fall, they break and smash everything in their path, and that no attempt of obstinacy or of determination on the part of any living being could accomplish anything against them.

A snort, as of a startled horse, came from the long patrician nose of Mother, a noise which in such an emergency clearly signified: "Let's get out of here. But fast!" And at once the beautiful animal rushed toward the exit with that funny, slow-motion gallop of her race.

Toto, happy at the chance of finally getting out of that hiding place where he had been so bored for so many days, started to gallop, too. But this method of proceeding was new to him, and so strange that some precious seconds were wasted. When he did get going, it still was at an uncertain pace. And the big vines, the thorny branches sticking out of the side of the passage delayed him further.

When, at the end of the dark green corridor, he came to a place where the vegetation was a little less thick and pierced by some thin, bright, sun rays, Toto more than naturally came to an abrupt stop and, full of curiosity and wonder, began to look around. His mother had already disappeared, as if swallowed by the shadowy greenness. That "something" which he hadn't understood very well, but which must have been the sign of some quite terrible danger to have frightened away his brave mother, hadn't happened yet, although the noise which had provoked such a panic still continued near at hand.

Toto, in the open for the first time—and alone—sensed that in his short life an important moment had come in which, to be on top of the situation, he had to comfort himself as much as he could like a grown-up. To begin with, it seemed indicated to snort like his mother had done a while before. The result of this effort wasn't too brilliant. All it amounted to was a sort of choked sneeze—nothing that would have frightened either an *mboko* or a *tshewi*.

Undaunted by this lack of success, Toto thought of those acrobatics of eyes and ears. These, after the recent rehearsal, went much better. Not only that, but one ear, during its impressive rotation, told him that the noise of leaves and crackling wood came from the right. There his right eye, in a quickened circumvolution, discovered some black

things moving in the green, and on them it fixed itself, deeply interested.

Of course Toto couldn't know that those black things were the heads of the pygmies who the night before had led me in following the footprints of his mother almost to the very entrance of her impenetrable hiding place. Neither could he imagine that all that movement of leaves and crackling of branches was nothing but a trick which the observations made in the jungle had taught me. In my turn, I had taught it to the Wambuti and asked them to execute these sound effects as naturally as possible, so as to scare away the Okapi mother and to avoid the useless cruelty of having to kill her if, to defend her little one, she had charged my small group of men.

Toto now saw that one of those small black forms was silently advancing toward him. His eyes, beginning to revolve again, discovered all around him other, similar forms coming from the left, from the front, and from behind. Then, abruptly, he raised his head, and stamped peremptorily with a stiff foreleg. It was intended as a gesture of impatience sufficient to frighten everybody away. But, to me, it looked only as a delightful motion very much like that of a well-trained tiny pony at the circus.

At that point, events precipitated in such a way that Toto couldn't make very much out of them. Something—he didn't know what—descended over him, enveloped him, impeded his every movement. The first human voices he had ever heard—and strange, clicking voices are those of the pygmies—spoke all around him, while he felt himself lifted up from the ground. An object such as he had never before seen, approached his head—my hand gently caressing it. Instinctively, he seemed not to dislike the gesture. But, before he could definitely make up his mind about it, some-

thing even stranger began. He wasn't walking. Yet, before his eyes, trees passed, one after the other, quickly, as when he had made those few paces of gallop. Only now they were all upside down. With the roots in the place where the leaves should be, and vice versa. And the earth was up on high and the sky below. Yes, it was as if he was running—but without touching the ground, without even being able to move his legs!

This continued for a long while, a peculiar rather than an unpleasant experience—except that toward the end his head was beginning to feel funny, his legs cramped. Finally, the trees suddenly stopped, the motion ended. In the strong light, large strange shapes loomed. They were green, quite funny, especially seen from his angle. Toto didn't have very much time to think the matter over, for in the midst of those remarkable things he again took contact with the ground—his back first, then his head, and finally, with a half spin, his legs.

In the big clearing of our Base Camp, in the middle of the semicircle formed by our huge green tents, the pygmies had deposited the bag. The bag which, attached to a long pole, had transported for more than four hours Toto, the first Okapi ever captured by a white man!

After so many hardships and the innumerable unsuccessful attempts we had made to capture an Okapi, the joy of my wife, of our companions of expedition equalled mine and at once manifested itself in a hundred little attentions. Between a caress and an affectionate word, we got Toto out of the bag—the canvas valise of one of our tents. Gently, we extricated his stiff legs from a tangle of the bag's ropes. Slowly, we helped him to his feet. Despite all my gestures, the native boys of our camp seemed to have gone crazy with



excitement. Not to be outdone, the Wambuti who had been with me, yelled to their little wives and the remaining pygmies a most dramatic account of our adventure. Shouting at the top of their lungs, the others intoned a song of victory. Drums began to throb all over the camp. Say what I wanted, there was no way to quiet down that pandemonium.

Toto, however, if he was alarmed at all by this avalanche of unusual noises, was too much of a born gentleman to show any emotion. At the natives he merely threw an indifferent glance of his rotating eyes. He projected a good foot of tongue to dismiss a fly from the top of his head. With a foreleg, he repeated that stamp of impatience, so delightful. Then, without paying much attention to my wife or to the other members of the expedition, he began to walk slowly, one leg at a time, straight toward me. I guess he remembered that first caress of his life. For, upon reaching me, he laid his head, full of confidence, on my arm.

This was the beginning of Toto's life among civilized people, as well as the beginning of my career as an Okapi nurse.

* * *

If there is a person in the world who knows little about the care of a young animal, I must confess it is I. As long as it was a question of shelter for Toto, everything went easily enough because several months before, in expectation of the so-much-desired capture, I had prepared a palisade about 500 feet long which included an intact little portion of jungle and a beautifully cool, dark hut, well built of poles and leaves and with a thick roof of grass.

For the most essential part of the food, in some way we managed, by improvising a nursing bottle with which to give Toto fresh goat's milk. At the beginning he wasn't at all enthusiastic about that outlandish system of feeding. But, once I managed to get him to grasp the idea and finally take some milk, the operation became easier and quicker from day to day. However, it developed that goat's milk did not agree with him, and after a week or so he refused to take it. Cows could not be successfully kept on account of their attracting tsetse flies. Thus was left only the possibility of using canned (evaporated) cow's milk, and this proved to be entirely successful.

My great problem was to teach Toto all the other things which, had he been still in his jungle, he would have learned naturally from his mother—how to drink water, how to wash himself, to eat leaves and lick saliferous substances; how to jump ditches and trunks, to pass under big lianas or through thick bushes, and so on.

How was I to tackle this foster parent's task? My wife, never having had a child, knew nothing. Our young men knew even less. The pygmies, far from being of help, simply split their sides everytime I asked them a question connected with my new mission in life. To them, it seemed just too funny for words that a *bwana*, a white, (and the *Bwana M'Kubwa*, the big boss himself), should devote so much time, take so much trouble for an animal.

Finally, I got an idea. Two cats gave it to me. They were a beautiful black Persian cat and her kitten, a handful of striped velvet, which a missionary going on leave had presented to us a few days before. The mother cat spent most of her waking hours patiently *showing* the kitten what to do. Even when they were playing together, you could see that she had her mind on *teaching by example*. That was exactly what the mother Okapi would have done, had I not taken away her offspring. Now, he was my responsibility—and it was clear that I had to take her place. Simple as anything, I thought. All there was to it was to show Toto what to do and how to do it. Smart as he was, he would imitate me and learn in no time.

At once I picked some leaves of lettuce from my wife's vegetable garden. Having made sure that nobody was looking at me, I went to sit down near Toto in his hut. As usual, he smelled me well all over, looked at me from every possible angle and, evidently satisfied with the examination, rested his head on my shoulder. Then, trying to eat as noisily and with as bad manners as possible, I began to chew one leaf, letting another protrude from my hand, which I kept near my mouth. The maneuver didn't fail to interest Toto. Moving his head to the right and to the left, smelling, revolving his big eyes, sticking out his long tongue, opening and closing his mouth, finally he managed to get hold of the leaf I held for him. Before he knew it, he was beginning slowly to chew—in fact with much less noise than I was making.

One can imagine my satisfaction, and how avidly I began to devour one leaf after the other, even forgetting that I have hated vegetables all my life. And the more I ate, the more Toto ate, each time taking the leaves from my hand with more facility. I rushed for a fresh supply and started bending down, more and more, until my head almost touched my feet. First thing I knew, Toto was trying to pick up the leaves himself, directly from the ground.

This experience was enough to send all my work to the devil. Every hour I could spare I spent in the palisade, in a succession of performances ridiculous enough to convulse any observer. But this way Toto learned to drink water from a bucket—of course after he had

watched me several times while I bent and sucked water directly with my mouth. My aversion for vegetables took a first class beating. But, in the process, Toto mastered the trick of how to find and eat *moodi* and *matungulu*, *anzararo* and *apopo*, *sangatoto* and *memengano*, the forest plants of which I knew the Okapi eats the leaves and flowers, and which in the extraordinarily fertile soil of the jungle grow with incredible speed. Again by imitation, Toto learned how to lick the salt which the Okapi likes so much, even though I didn't like it in the least, in such concentrated form, and, after each "lesson", I was left with a terrible thirst for the rest of the day.

At times, it wasn't an easy job that I had undertaken. But Toto was learning. He learned so quickly and so well and every day he was growing so more fond of me, that I just couldn't give up.

Whenever my companions had some time free and wanted fun, all they did was to come and look in the palisade. There, they would see me, in my function of Okapi-mother, galloping like a madman between bushes and trees, jumping over trunks, passing under big lianas, tearing my clothes and skin against thorns, with Toto solemnly, docilely following me everywhere, at exactly the same pace. Now and then, he would stop. In those rare cases, I knew only too well what was going to happen. I could call him until I was blue on the face, but he wouldn't budge—not until I returned to him and gave him a caress, or a little scratching under the throat, the only place where his tongue couldn't reach, or pinched with my fingers his neck, just as his mother would have done with gentle bites. Then, he would again be his most obedient self—and again become my most attentive pupil and most conscientious imitator.

So, the days rapidly passed both for me and for Toto, who between one thing and another never had time for nostalgic thoughts. The only time when he showed some home sickness was at sunset. That was the moment when in his mother's hiding place in the forest he would have been listening impatiently. From far away he would have heard the longed-for gallop approaching. Then his mother, big and strong and beautiful, would have entered the green labyrinth. She would have found him standing waiting for her, ready to throw himself voraciously upon her for his warm, comforting dinner. During which his mother would have licked him all over, at the same time imparting to him, in the Okapi's way which no man can understand, who knows how many interesting news: about the far big river where she had been to bathe; about the encounters she had made; about the jungle's events which are a secret to

everybody—except to the grown-up Okapi who see all, hear all, and smell all.

Then Toto would have laid down, happy and satisfied, as close as possible to his mother, so as not to have to fear the cold of the night, nor the threatening noises, the obscure dangers which—needless to say—night brings to men and animals alike. . .

Instead of this bliss—my lettuce leaves, my caresses, my words of sympathy and the little blanket I tied around him! Small consolation and quite a poor substitute, Toto must have felt. The fact is that every night he looked at me with such a sudden sadness in his big eyes that it broke my heart. During most of the day he had taken the detached, self-sufficient air of a full grown Okapi. But at that moment, if his dignity and lack of vocal chords had permitted, he would certainly have cried the Okapi translation of a pitiful "Mama!"

True, there in that hut, well-made and clean and warm, he didn't have to fear the dripping of the rain nor the fall of great trees nor the ambush of a leopard nor the poison of snakes, nor all the other dangers and perennial anxieties that embittered the life of his contemporaries in the jungle. But, so young, how could he recognize and appreciate the values of such elements and security?

If, at least, I could have given him the company and warmth of another animal during the night! Perhaps that would console him a little. One evening I tried. The only animals at my disposal were the goats we kept to supply the milk for Toto. I got the best-behaved of them into the hut. I tied it at a certain distance from the place where Toto

usually slept, so that the goat could move freely and go near him but not close enough to give him a butt with her horns. Then I waited in the doorway, watching for some reaction. Toto didn't move an inch. Nor did he turn his head from the opposite direction, in which he chanced to be looking. As a beginning, it was not too encouraging. But, I thought, give them time. Maybe in a few hours they will become friends.

When, after dinner, I returned to the hut I quickly lost every hope. The continuous, stupid baaing of the goat must have grated terribly on Toto's nerves. Having taken refuge in the farthest corner of the hut, there he stood, his back to the goat, his eyes turned as if in imploration toward the sky—exactly like one of us trying wordlessly to say: "Please, for heaven's sake, please take away that disgusting, noisy, vulgar imbecile, before I go mad."

Not to leave me in any doubt as to his feelings, Toto lifted his head and stamped on the ground with his stiff little foreleg—that gesture of his I found so amusing. He did it again and again. He couldn't have been more eloquent if, by some miracle, he had managed to speak: "Ugh! Take her away!"

Nor did his gesture of impatience cease, nor would he consent to lie down, until the goat and her beastly baa had been taken far from sight and hearing. Only then did he calm down and rest his head on my arm.

Then, he would have said, "Believe me, better alone than in bad company,"—were it not for the fact that Okapis leave to men the use of such trite sayings.



occasional attack on their young by leopards or pythons, and as both these creatures can climb trees with facility, why bother building nests in branches?

But it often is the rare occasion that makes for the most excitement in the jungle and this day was to prove hectic and dangerous for one of the gorilla families, at least.

A pair of hungry leopards—a male

instant her infuriated mate made ready to meet the charge of the leopards.

The first cat, the male of the pair, practically collided with the bull gorilla. With a snarl of rage the spotted demon leaped for the ape's throat, slashing at his midsection with deadly claws. At the precise instant that would save the gorilla from being disemboweled, the ape shot out a huge, hairy paw which grasped the throat of the leopard with such force that the cat's windpipe was crushed. Almost simultaneously the gorilla's other fist crashed against the leopard's jaw, breaking its neck. The ape released the cat's carcass and turned its attention to the remaining leopard, which had sprung onto its back. All this took place much faster than it can be told. While it was happening, the mother ape had scurried into the highest safe branches of the tree where she comforted her terrified offspring as they looked down on the deadly struggle.

Had the two leopards jumped the male gorilla together, they might have conquered the ape. But an instant's hesitation on the part of the leopardeess had given the gorilla time to finish off her mate. Now, however, the second cat was on the gorilla's back, inflicting terrible wounds with her razor-like claws and seeking to sever his spinal cord with her fangs. But the five-inch long spines of the gorilla's neck vertebrae, surrounded with incredibly massive muscles, kept the cat from reaching a vital spot.

The gorilla caught hold of one of the leopardeess' forelegs. With a powerful downward sweep of his arm—for all the world like a wrestler executing a "flying mare" on his opponent—he hurled the luckless cat to the ground with a terrific impact. The leopardeess was stunned. The gorilla crushed her skull with sledgehammer blows of his ironlike fists. After he had beaten the leopardeess' skull into a pulp, the sorely tried ape sat down to rest and take stock of his injuries. The deep, raking scratches on his back were severe, but not fatal. It is probable that in due course the animal recovered completely.

The entire band of gorillas had been aroused by the excitement and some of the mothers, alarmed by the day's happenings, were carrying their babies high up into the tree for the night.

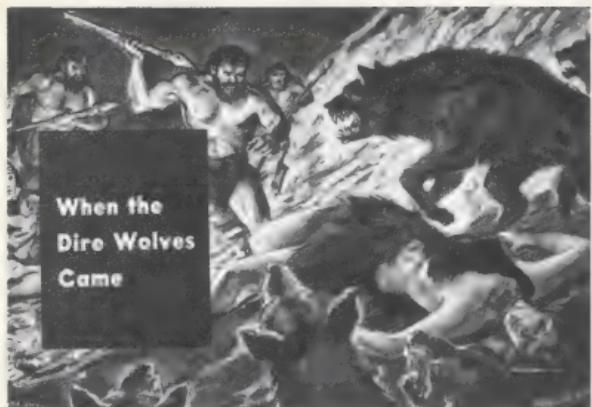
Note: During recent years at least two gorillas in zoos have been fatally mauled by leopards and this has created a widespread belief that the cat is no match for the ferocious, death-dealing cat. However, captive animals are one thing and those in the wild another. In the former state their senses may be dulled by the lack of need that there have to be sharp in order for the animal to survive. And it is conceivable that under captive conditions an ape loses his jungle instincts to a greater extent than do his pets and other natural killers. If adult gorillas are any victim for leopards—which in considerable numbers share the same forests with the apes—they have been exterminated by the spotted killers long before now. Actually, a leopard, or even a pair of leopards, attacks a gorilla only on the rarest occasions, whether hungry or not. However, it cannot be said that the outcome of such an encounter is always as favorable for the gorilla as it was in the instance here related. The Editors.

Jungle Fury

(Continued from page 6)

and female—had crept silently through the dense undercover toward an unsuspecting baby gorilla that played almost like a human child a few yards from where the mother gorilla watched with a critical eye her mate's construction of a nest. Possibly the spotted cats, as they slunk nearer and nearer to the infant, were judging whether they could approach close enough to the baby ape to snatch it before the father caught up with them.

The three gorillas, father, mother and baby, became aware of the leopards just as the big cats catapulted themselves at the young one. With a shriek of fear, the baby gorilla dashed with surprising speed toward its mother—bare inches ahead of the leopards. With one swift motion the mother gorilla seized her baby by one arm and fairly shoved it up into the tree behind her. At the same



When the Dire Wolves Came

(Continued from page 12)

that had attracted the wolf. Still, White Hair hesitated to attack the animal.

The long gray hackles on the neck of the dire wolf rose in a challenge. The animal seemed to sink lower on crouched legs. White Hair had seen the dire wolves attack before. They came with a rush and a sideways slash of their razor-sharp white teeth. These were the same teeth that could hamstring a bull bison with a single snap.

With a heave of his shoulders, White Hair threw the quarters of the camel down into the dirt before his feet. Still facing the crouching wolf, he slowly backed away.

Even as the large baleful eyes were still fixed on White Hair, the wolf gathered a whole quarter between his jaws. There was the snap of bone as the teeth bit through. White Hair slid behind a clump of screening willows as the wolf fed noisily.

White Hair walked slowly down the little valley where he had encountered the wolf. In the distance a curl of campfire smoke hung in the still air. Brown-skinned figures of other men huddled around the distant fire.

White Hair passed a powerful hand over the top of his head as though to order his thoughts. Through the middle of his raven black hair ran a streak of pure white from front to back. Even though White Hair was still a young man, this curiosity of coloring had given him his name and a certain standing among the Ice Age people of his time.

Indeed it had been White Hair who had led them to the Blackwater Draw when the game failed on the open Plains. Life had not been easy in the America of 8,000 years ago. When the great glaciers on the Rocky Mountains to the west had begun to shrink and melt away, the rains and snows were less than in the times when White Hair's

forefathers had come across the Bering Strait from Asia. With the dwindling of the rains, the great herds of straight-horned bison, the mammoth, the Ice Age horses, and even the camels, had begun to disappear also. It was only along the Blackwater Draw, in what is now eastern New Mexico, that some remnant of the once-teeming herds of game still lingered before extinction. In this place, White Hair and his small band of followers might have lived secure throughout their natural lives if it had not been for a new danger.

The first to feel the teeth of the menace had been the mother of White Cloud. The old woman had gone out on the edge of the valley to gather firewood. The people in the camp had heard her scream once in the distance. That was all. When some of the hunters went that way, they found where a dire wolf had picked her up bodily and taken her over the ridge and into the timber. None of the people camped in the Blackwater Draw had ever seen her again.

At the end of the first year which the hunters and their families had spent in this well-watered valley, the wolves had increased and the game diminished. As the herds of bison and horses to the north died out, these predators drifted southward in search of more meat. Whether they killed the game in Blackwater Draw upon which White Hair and his band subsisted, or whether the wolves ate the people themselves, made little difference in the end.

The people of White Hair's band kept little record of passing time but it was in the fall of a year which we might record as 7,456 B.C. when a ravaging horde of at least a hundred dire wolves moved into the Blackwater Draw. During the days of this time, the wolves were seen skulking in the grass along

the river. The nights were made terrible by their howling. Such game as remained became scattered and skittish.

The dire wolves as well as the human hunters felt the pinch of scanty hunting. It was this, perhaps, that precipitated that first awful night.

A single hunter as a watcher was as usual in the middle of the camp. He leaned drowsily on his spear. A sudden gurgling cry came from the darkness by one of the low-burning fires. The watcher stood erect. The vague forms of other men, wakened by the strangling sound, rose from beside their fires. A woman screamed. All in the band of White Hair knew that the great gray wolves kill by slashing the throats of their victims. A single flame fed by a knot of pine wood flared up. A hulking form half as tall as a man stood there in the half light. Two yellow-green eyes reflected the firelight. In the jaws of the thing, was the form of a girl. She hung limp and already dead. The wolf had torn her throat away with a single bite.

As the men stood stunned, the dire wolf slid away into the darkness carrying his victim as easily as any other morsel of meat he might have fancied.

White Hair was troubled. He knew well that the next night the wolves would come again and with greater boldness. Excited by the smell of fresh blood, they might charge together. If they attacked in a pack, the slashing fangs of the dire wolves would overwhelm the humahs like an avalanche from the mountains. Even if the hunters collected enough wood to keep the fires going, they could not feed the women and children if they remained huddled like frightened rabbits in camp. The best hunters of the band, with their flint-tipped spears, might surround and kill two or three of the great wolves, but this would be of small use. Also, pits which White Hair and his people occasionally dug to trap the great mammoth would not serve to snare the sure-footed dire wolf.

And yet White Hair and his people had overcome the mammoth by digging a pit trap. For all their great bulk and mighty tusks the elephants had been helpless. Some kind of a trap . . .

White Hair looked over the floor of the valley that was the Blackwater Draw. A few lazy pools of semi-stagnant water were connected by slow rivulets. On both sides of the stream the bunch grass, tall as a man's waist, was dry and sere with the coming winter. If the human hunters built fires and stayed close by them, the wolves might be kept at bay, but not for long. "Some kind of a trap which would catch a hundred wolves . . . If White Hair could devise such, he was mightier than any of the other men." . . .

It was evening when White Hair told

his plans to the other hunters. They shook their heads. It was a desperate venture, they said, and all would be killed. White Hair made clear to all that there was little likelihood of any humans remaining alive in that valley on the next day in any event. It was at last, by threatening the frightened people before him with the bloody alternative, that White Hair persuaded the hunters to follow his plan.

There was one pool of the Blackwater Draw deeper and wider than the rest. On the far side of this was a marshy bank where the grass grew luxuriantly and the ground was wet. It was here that White Hair told the women to bring all the firewood that they had gathered. White Hair directed them to put the wood in a row of piles which formed a large semicircle reaching from the bank of the deep pool to another point on the same bank a spear's throw distant. When this was done, he showed the women and the men also how to gather bunches of the dry grass and tie them together with twisted ropes of straw.

It was almost dark when the thirty or forty people of White Hair's band rested from their labors. Fear showed in the eyes of more than one as they looked out over the waving grass tops in the gathering dusk watching for the first slinking gray form that was sure to come.

One of the hunters had killed a young horse. As two old women carried the carcass into the center of the semicircle formed by the wood piles, all anticipated at least a mouthful of stringy meat before the terror of the night should begin. But White Hair waved them back.

"There shall be no eating on this night," he said grimly. As he spoke, he pulled a short flint knife from the twisted skin that served him as a belt. With the jagged flint he began to saw at the belly of the horse, pulling out with one hand strings of bloody entrails and raw red flesh onto the dirt by the carcass.

"At least let us die with our bellies full," growled one gnarled old hunter as he advanced toward the horse carcass.

White Hair snatched up a javelin. He raised the point until it was level with the advancing man's chest. White Hair looked down the straight wood of the shaft. The surly hunter saw in White Hair's eyes a glint that told him clearly that death was close. He lowered his head and, still muttering, dropped back and joined the silent group of other hunters.

"Bring me a stone boulder the size of my head," said White Hair quietly. Then to another man he added, "Bring also a twisted length of camel skin."

White Hair himself selected a stout piece of driftwood from one of the fire

piles. Using the boulder he drove the section as a stake into the ground beside the carcass of the horse. With the twisted piece of hardened camel skin, he tied one leg of the horse firmly to the base of the stake.

All was ready. The group of humans stood glumly before him. A wolf howled suddenly quite close.

"Are we to have no fire?" asked a querulous woman's voice from the middle of the group.

"No fire," repeated White Hair in a low voice, "If a single person, man or woman, lights a fire before I give the signal, I'll run him through with my own spear."

Four hunters, each with three extra javelins, White Hair directed to wade into the pool until the water reached up to their shoulders. The women and children he gathered in a solid group on the bank of Blackwater Draw at one edge of the semicircle. All who could hold a spear pointed outward. After making certain that the fire-makers had firesticks and tinder ready, White Hair, with three of the strongest hunters of the band, took up a position across the semicircle opposite to that where the women and children waited in fearful silence.

"When I strike a wolf with my spear, you do also thrust your weapons into that same wolf." White Hair instructed. "Do not cast a javelin again until I give the signal."

"But how are we to kill all if we do not cast our spears . . . ?" the man's voice was blotted out by the howl of a dire wolf. Then another wolf howled, and another. In a moment the quiet valley of the Blackwater Draw was a bedlam of awful sounds. The wolves were gathering for the final kill. The closest ones could smell the sweaty bodies of the humans and the raw blood of the freshly-killed horse.

Against the darkening sky, the hunters saw the grass tops move as the gray back of a dire wolf loomed close. The howling ceased as suddenly as it had begun. The wolves were moving silently to attack. Humped gray backs showed dimly here and there. There was the suggestion of eyes in the dusk and a slathering of rough tongues over teeth.

Where the women lay huddled, a voice shrieked, "Fire! Let us have fire!"

"No!" roared White Hair as he stood up to his full height. "No! Not until I give the signal."

A single gray form detached itself from the others and came forward. The carcass of the horse jerked in the darkness. White Hair could see a shadow darker than the rest. The dire wolf had grasped the horse by the back of the shoulders and was trying to drag it away. But the thong and the stake held it fast. White Hair measured the dis-

tance and fitted a javelin to his spear thrower. The dire wolf was broadside to him. White Hair fixed his eyes on the spot where the wolf's shoulder must be and bunched his muscles for a powerful cast. Leaning forward with all of his strength, he threw the spear. He heard the dull thud as the flint point sank through flesh and cartilage. The wolf screamed and dropped the carcass of the horse. The spear had hit too high.

"Now!" hissed White Hair between clenched teeth. The three other hunters cast their spears at the wounded wolf even as the animal turned its great head and opened its jaws to charge. One spear missed entirely, but the other two thudded home in the neck and flank of the raging beast. Screaming with pain, the wolf went down.

Even as the first dire wolf died, several others slunk forward toward the bodies, attracted by the scent of blood. One wolf circled so close to the humans that they could see its baleful yellow eyes. As it stood there with its white teeth gleaming in the darkness, White Hair cast again. The spear struck the wolf in its middle and penetrated clear through so that the flint point stood out an arm's length on the far side.

"Throw!" yelled White Hair again. But the wolf was too close. With a single bound the animal was upon them. Still holding their javelins in their hands, the men thrust toward the dark form that reared above them. The struggles of the wolf and the sheer weight of the great animal bore them downward and wrenched the spear shafts from their hands. A hunter to White Hair's left cried out in agony as the teeth of the wolf crunched through his shoulder and met in the middle. The wolf and the man died together in a heap in the darkness.

"Roll the bodies into the center," White Hair directed the other men. They obeyed.

Gray forms of other dire wolves were jostling each other as they came in to feed on the meat. There was the sound of breaking bone as white wolf teeth tore fragments from the carcass of the horse and the bodies of the two dead wolves indiscriminately. The darkness seethed with moving forms. As soon as the horde had eaten those already fallen, the humans were next.

White Hair carefully balanced his last spear. He threw the shaft in an arching throw among the hulking forms of the wolves. He heard the sodden thump as the flint head sank into solid flesh. Almost instantly there was milling confusion. Wolves reared up on their hind legs to get at the wounded one. Blood was to these carnivores. It mattered little if it came from wolf bodies or from the meat of men. Wolves, snapping at each other to get at their wound-

ed comrades, were in their turn wounded by slashing teeth. Several knots of snarling, biting wolves struggled over the ground within the semicircle. Other dire wolves that had waited in the high grass, rushed into the fight.

Above the roars and growls of the fighting wolves came White Hair's cry, "Now! Build your fires! Fires . . . Light all the wood!"

The hunter at White Hair's side dropped to his knees and pulled out his fire sticks. Inserting one stick into the notch in the other, he began to twirl vigorously. In a few moments the notched stick began to glow. The man pushed powdered wood as tinder next to the spark and blew softly upon it. Still the flame did not catch. The evening air along the Blackwater Draw was damp. The hunters in the other group on the other side of the milling maelstrom of fighting wolves were also in trouble.

In the trampled space around the horse carcass, six or eight wolf forms now lay. A dozen other dire wolves fed on the bodies and snapped viciously whenever another animal approached their meal. A solid mass of dire wolves advanced together toward the women and the few men who protected them. No number of spears could stop them now.

Mothers gathered their babies to their breasts to die together. The wolves were now almost beneath the spears of the men in front. A single rush and the slashing fangs would brush aside the puny spears and tear the human flesh behind.

Suddenly there was a plume of smoke with a bright spot at its base. Quickly other grass torches were lighted from the flame and thrust into the base of the pile of wood.

"Fire the other piles of wood," yelled White Hair.

Hunters circled to light the piles of wood that had been prepared. A few wolves slipped away into the darkness before the semicircle of blazing wood was complete. As the frantic men applied the torch to the last wood pile, perhaps eighty dire wolves stood with their backs together within the wall of flame.

The men were exultant now. They shouted and shook their spears as they raced from one fire to another to replenish the flames.

When a wolf approached the fire too closely, three or four hunters threw their spears together to bring the wolf down. Whenever a wolf was wounded, the others fell upon him with added ferocity which they could not vent upon the humans. The dire wolves, fierce by nature and made ravenous by hunger, fed upon each other within the circle of fire. Some of those, with their bellies

half full of meat, tried to escape across the pool which lay below the bank. It was here that most were killed. As the dire wolves entered the water, the hunters stationed there stabbed them with their spears until the slow current ran red with blood. Feebly struggling bodies drifted down the stream. Here and there a single wolf dragged himself out on the far side of the water to die on the bank.

It was almost morning when the last wolf had tried to swim the pool, and had been pierced by a dozen shafts wielded by the weary hunters who waded into the water. Of the original group of humans who had laid the trap for a hundred wolves, there were many who would never enjoy the victory.

Four of the women and six hunters had died in the fight. The trampled ground within the fires was strewn with the carcasses of wolves. Never in all the memory of the Ice Age hunters had there been such a slaughter.

White Hair and his people seldom heard the howl of the dire wolf in the valley of the Blackwater Draw after that awful night. Most of them lived out their natural lives in the valley. Even centuries later when the Age of Ice had been forgotten, men remembered the valiant group of hunters led by a single man with a streak of white in his hair. Indian tribes still tell around their campfires of those far-off times of their ancestors when the dire wolves came to the Blackwater Draw.



A glance at the head of a lion explains why it is called "The King of Beasts."

THE KING OF BEASTS

(Continued from page 17)

weight 282 pounds, and total length 7 feet 10 $\frac{1}{4}$ inches, of which 2 feet 10 inches is the tail. The maximum weight of a male lion (without its being gorged with food) would probably be under 600 pounds, and of the largest lioness just over 400 pounds. But it would be difficult or impossible to find a lion or a lioness of such great size in the wild state today.

The African lion, in the opinion of those who have hunted it in true sportsman's style, ranks near the top in a list of the ten most dangerous big-game animals. Powerful and efficient, quick as lightning, equipped with death-dealing teeth and claws, the lion may be likened to a gigantic house cat. And his terrific energy has a physiological explanation. Some years ago the anatomist, Dr. George Crile, dissected and made a scientific study of the energy-producing organs in nine captive and six wild lions. He did the same with two tigers. His

conclusion was that "For their size, the lion and the tiger exhibit a greater outburst of energy than any other known animals. Taking their food fresh, the lion and the tiger derive the maximum energy content from the flesh of their kill. After the gorge both the lion and the tiger sleep and loaf until hunger drives them to kill again." While a lion in a zoo or circus is given only 10 to 15 pounds of raw meat a day, a wild specimen may consume as much as 60 or 70 pounds of a carcass before leaving it. Certain glands and nerve plexuses in the lion and the tiger, Dr. Crile found, were relatively larger and more complex than those in any of the 3,734 other animals that were studied. This superior development of their energy-controlling organs is the explanation of the intense momentary activity of the great cats. And of the two, it would seem that the much larger adrenal glands in the lion make it more efficiently equipped for a

rushing attack than the tiger. Careful observers have estimated that the actual time required for a lion or a lioness to kill an antelope or a zebra is often less than a second! During a sprint of 100 to 200 yards, a lion can quickly reach and maintain a speed of about 50 miles an hour! Incidentally, the expression "lion-hearted" is a misnomer, if by it one means that the lion is brave because he has a large heart. Actually, a lion's heart is not as large as that of a horse or a deer or other "endurance" animal of similar bodyweight to the lion's.

Unknown to many people (some movie directors among them!), the lion hunts chiefly at night. He preys upon zebras, antelopes, and less frequently on buffaloes and the young of larger animals such as elephants, hippopotamuses and rhinoceroses. Frequently, in singling out an individual from a herd of antelope or zebra, two or more lions, or a single family, consisting of male, female and young lions, will team together. As to the method used by a lion in killing its prey, the famous hunter Frederick Courtney Selous was of the opinion that it varied according to circumstances. He relates that he has seen a horse, a baby elephant, and two antelopes killed by a bite in the throat. In other horses and zebras, death was produced by a bite on the back of the neck behind the head, severing the spinal cord. Buffaloes are sometimes slain by a dislocation of the neck, which the lion effects by springing onto the buffalo's back, then grasping its nose with one paw and giving the neck a sudden twist. However, a full-grown bull buffalo, if not taken by surprise, is more than a match for any one lion, and usually, when such a powerful adversary is attacked, two or more adult lions combine their forces.

The lion does not often become a 'man-eater,' but on occasion he may. Contrary to popular belief, a lion will usually not molest a human being unless provoked. If you mind your business, the lion will mind his. Occasionally, however, an old, decrepit lion who can no longer catch his usual prey, will learn that an unarmed man is easy to slay. He thereby becomes a "man-eater." But not always are such lions old ones, for it is said that the taste for human flesh can be transmitted from the parent lions to their cubs. The latter, upon reaching maturity, will become man-killers like their parents. The fact remains, however, that, where lions are concerned, human beings become part of their diet only in abnormal cases.

The lion has prodigious strength. Nevertheless, it has frequently been exaggerated by careless or misinformed writers. The great German naturalist, Alfred Brehm, wrote: "I have seen a lion with a two-year-old ox (carried in his mouth) clear a wall over six feet high. I have also seen the deep impress of the ox left in the sand, when the lion

dropped it on the other side, previous to taking it up again. The oxen in those countries are not as heavy as ours. Often one sees the furrow which the animal had made when being dragged to the place at which he was devoured." Some other writers, in quoting this example of a lion's strength, gave the height of the wall as nine feet and the size of the ox as a full-grown one! Thus are fables commenced.

Like all such statements, the merit of the aforementioned feat depends upon the accuracy and completeness of its description. To "clear" a high wall, in the manner that any member of the cat family would do it, does not mean that the animal leaps clear over it in the style of a human athlete clearing a hurdle. Rather, such a "leap" is a connected series of convulsive efforts, in which the cat uses the claws of both its fore and its hind feet for momentary purchase. And since a full-sized male lion can reach up with its front feet to a height of about nine feet while keeping its hind feet on the ground, it would require no "leap" whatever for the animal to pull itself up and over a wall only six feet high. In the example cited by Brehm, therefore, the limiting factor would be not how high the lion could leap, but how heavy a carcass it could hold in its jaws. Some writers have asserted that the lion throws the body of victim over its shoulders, and carries it in that position. However, the very experienced big-game hunter, F. C. Selous, says: "I have never met with an instance of a lion carrying an animal that has killed, and, as far as I know, their invariable practice is to drag the carcass along the ground, holding it by the back of the neck. This they do with even the smallest antelope, such as impala; and I do not think the South African lion would be capable of lifting such a heavy beast as a bullock from the ground, as the North African species is said to do, much less springing over a high fence with one."

In a horizontal jump, presumably from a standing start, there is a record of a "heavy lioness" having covered a distance of 21½ feet, the leap being made from a bank four feet high. But it should be considered that such a "jump" by a four-footed animal is not directly comparable with that made by a man, since the quadruped takes off from its hind feet and alights on its front feet. Thus the length of its stretched-out body and limbs has to be deducted from the length of its leap. If we assume that a lion can cover 20 feet in a single standing spring on level ground, about nine feet would have to be deducted for the distance between the animal's fore and hind feet. This would make the lion's actual leap about 11 feet, or no greater than the record for a human athlete.

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Here are some additional "lion facts." Lions and tigers, unlike their smaller cousins the leopard, jaguar, and puma, are poor tree climbers, and many a hunter has saved his life from one of the two first-named carnivores by climbing a tree to a height beyond their jumping reach. A lion in the wild drinks usually only once daily, but sometimes oftener in hot weather. While essentially nocturnal, lions, if hungry, will at times stalk game during the daytime. Several lions together are more likely to be seen than a solitary individual, and sometimes a hunting troop, or 'pride,' of lions will contain from 10 to 15 individuals, of both sexes and various ages. A hungry lion will eat almost anything, even a porcupine! And he is not averse to eating an animal that he has not killed himself.

Lion cubs are born usually in March or April, the average number being 2 or 3, although there may be only one or as many as 6. The cubs' eyes are

fully open at birth, and in this respect differ from those of most other cats. Each cub at birth is about 20 inches in total length and weighs about 2 1/2 pounds. From the age of 5 to 6 months onward, the cubs accompany their mother in search of prey, and a victim of a young lion may be terribly mangled while the lion is still learning the art of killing. Commonly, an adult lion has only one mate, but there are exceptions to this rule.

Lions have a great curiosity about strange things (such as a thorn fence put up to keep them out), and that is why they have so often been described as aggressive and dangerous when really they were only curious. In olden days (and even today to a small extent), warriors of the Masai race of negroes of central Africa killed lions with spears. And in ancient times, men sought to acquire the strength and courage of the lion by eating his flesh. All they got, however, due to the extreme 'richness' of the lion's flesh, was indigestion!

intelligent elephant. Barnes once said that Barney was the smartest animal he had ever owned and the most easily trained, but that he was just plain mean and had never once been known to show affection for anyone or anything.

Not long after he became an attraction with the show, Barnes learned the history of the dwarf. He had been captured by East Indian natives who found him traveling with a herd of normal-sized elephants. That fact alone surprised Barnes for it proved that Barney was no rogue elephant. A rogue always stays by itself away from the herd. Rogues are so insistent on solitude they will instantly attack any elephant of either sex that comes near them. Barney was no rogue, he was just naturally ornery.

The Hindus tried to train him to work but he became such a problem with his temperament that they gave him his freedom, hoping he would go back to the jungle and bring peace to the camp. Barney had notions of his own and refused to leave. He hung around the compound, stealing food and exciting the other elephants until they were ready to rebel. When the animal dealer came along they offered Barney for such a low price the dealer bought him and wired Barnes.

Barney was an able performer so long as there were trainers by his side. He could balance himself and walk down a row of ten-pins. He was the only elephant that ever learned to play musical sleigh bells and he could also play a horn and harmonica.

"Cheerful" Gardner, Barney's trainer and one of the best in the business, twice talked Barnes out of his decision to have the little delinquent destroyed. Cheerful always believed he could make a good elephant out of Barney but he had finally to give up the idea as a bad job after Barney had injured several assistants.

After the incident with Tusko, Barney was no longer taken on the road. He was considered too dangerous to have around crowds so was kept behind in winter quarters. When a Mexican circus owner offered to buy Barney, Barnes let him go, glad to be rid of him at any price.

I hadn't seen either Barnes or Barney for several seasons when the deal with the Mexican was made. In fact I had just about forgotten the little demon existed when I next ran across him. I had been prowling around Mexico City on the trail of material for a couple of adventure yarns and was traveling north again, hopping from town to town, when I began to notice circus posters here and there. One of the attractions always advertised was a fight between a lion and a bull, and these events always took place at the town's bullring. The circus was somewhere up ahead of me, and according to the poster dates not



(Continued from page 19)

police elephants had no trouble handling him and he was smart enough to behave when chained to one. At other times, though, he was always looking for something or somebody to whip. He had to be watched every minute when being led through the menagerie tent to keep him from charging the cages of the lions and tigers. Once he broke loose from his stake and tried to kill a prize zebra. The camels and zebras were scared to death of him though he was the only elephant they feared. His life was filled with day by day records of attacking something. He seemed to be sensitive of his small size and tried to make up for it by challenging the world. Often he would stand and trumpet defiance and the sound became a familiar one around the big-top. He hated everything alive and his one desire was to kill.

Barnes used to chain Barney alongside Tusko for exhibition. His smallness made Tusko seem even larger by comparison. It was on one of these occasions that I first saw Barney. Tusko by

this time had grown so dangerous he was kept in a virtual straight-jacket of chains and he couldn't protect himself against the little guy's attacks. Barney would slam into Tusko with all his strength, butting and trying to gore the big fellow in the belly.

Tusko grew so leery of these attacks that finally he began to bellow for help. Barney, when he found that Tusko couldn't fight back, grew so aggressive in his attacks that Barnes had to order them separated. The separation may have relieved Tusko of a sore belly but it didn't do anything for Barney's conceit. When Tusko was taken away he considered that he had whipped the biggest thing alive and he roared his defiance of the world for hours. He became so unbearable after that that he was taken out of the spectacle.

Once or twice Barney became so unruly that Barnes considered having him destroyed. The only reason he hesitated was because of Barney's drawing power as a circus attraction. The customers loved him. Also he was an extremely

The Durndest Fight I Ever Saw

very far away.

I questioned a few people who had seen the lion-bull fight, and from the information I gathered it appeared that the lion always won. That made it a pretty good thing for the circus owners. Bulls were cheap and by putting the fight on in the bullfight arena they could get more paid admissions through the gates. There were no laws in Mexico at that time forbidding fights to the death between animals, and there may be none now for all I know.

I caught up with the circus a few days later and the first thing I noticed were the new posters and handbills about the big fight—only this time the antagonists were to be the lion and an elephant.

It was a sure-enough good stunt because the whole town was talking about it. I arrived in town on Saturday. The fight was to be held Sunday afternoon. I happened to know the head of a company of Federal Rurales stationed in town and I looked him up. We had dinner together and later he took me around to some of the night spots. In one place we ran into one of the circus owners and I asked him about the fight to be staged next day. I wanted to know why he had switched from a bull to an elephant. The man didn't mind talking about his lion which he seemed really proud of but he kept steering the talk away from the elephant. The lion, he said, was a big handsome male that had already killed seven bulls without once having been scratched himself. He finally admitted, after insisting on our promise that we wouldn't let the facts get out, that the elephant was a pigmy and a "bad hombre" which he had to get rid of anyway. The little devil, said the circus man, had just killed his second trainer and must be destroyed. Instead of shooting him the owner came up with the happy idea of letting the lion do the job, thus turning a neat profit from the affair.

Next afternoon the Colonel and I took our box seats and waited through two bull fights to see the lion-elephant engagement. As soon as the second dead bull was dragged out a huge steel cage was set up in the center of the arena. The cage was all of thirty feet across and apparently strong enough to confine the contestants. It had originally been made for the lion-bull fights.

The lion was brought into the arena first, his cage carried on a cart which was placed near the big combat cage. He was a magnificent cat. I'd always heard that Mexican circus animals were ill-fed and ill-treated but this lion certainly looked in the pink of condition. He was as big as any lion I'd ever seen.

Two elephants were brought in next. A small one chained to a big police elephant. As soon as I saw him I rec-

ognized Barney. I gave the Colonel a quick run-down on Barney's history as I knew it then, explaining that here was no mere ill-tempered pigmy but the meanest ton of dwarf elephant alive.

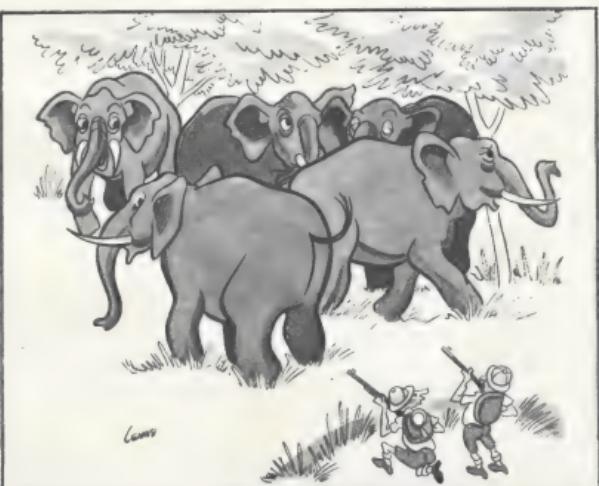
When it was announced that the small elephant was going to do the fighting the crowd booed and shouted, but they were pacified somewhat by the obvious fact that the lion was certainly ferocious enough.

When Barney saw the lion he went wild, pulling against his chains and trumpeting angrily. The police elephant butted him a few times but Barney wouldn't quiet down. He seemed to sense that he was to fight the lion, and he left no doubt that nothing would suit him better.

Getting Barney into the cage and holding him until the lion could be brought in proved to be something of a problem. It was finally done by running a chain through the bars from Barney's leg inside the cage to the other elephant outside. Then the lion was brought until the door of its cage was against the door of the big cage and both animals were released at once.

Barney was across the cage trying to gore the lion before the big cat, accustomed to the slower bulls, could make a pass. Barney's tusks missed by inches and the cat rolled over, came up and sprang for Barney's back. Barney side-stepped and the cat crashed to the ground beyond. Barney was on him instantly trying to pin him down. The lion fought, backing away. One blow slashed across Barney's cheek opening a wide gash. Barney bellowed and lunged again and again missed by inches as the lion twisted away.

Time after time the lion leaped for Barney's back and not once did he make it. Each time Barney met the maneuver by side-stepping or rushing and the cat would crash the ground or the bars. Barney was on him each time before the lion could recover and the big cat would have to roll or whirl to avoid death on Barney's tusks. Once Barney caught the lion with a swinging blow of his tusks and threw him all the way across the cage into the bars. Barney lunged in and the lion, momentarily stunned, was caught. For an instant we thought the fight was over. Sheer luck saved the lion when Barney's tusks passed on either side of his body as they drove into the earth. The lion, pinned down for a moment, slashed with both front feet at Barney's feet. Both cheeks were ripped open and pieces of hide hung from Barney's jaws. The lion escaped as Barney pulled his tusks free but was caught again and slammed into the bars as Barney wheeled, lunged and bellowed with rage and pain. Again the lion sprang for Barney's back and Barney, half blinded from the blood running down his face, almost didn't move fast enough. The lion landed on his back but Barney was already in a lunge that shook the cat loose. The lion sprang for the far side of the cage and turned, intent on another running charge. Barney anticipated the move and caught the lion in mid-air with a swinging blow of his tusks. The blow knocked the wind out of the lion and for the next minute he concentrated on avoiding Barney's charges. Barney was bellowing steadily and the cat was making his share of noise too. Then the lion tried a new stratagem. He charged, but



"Now, let's not kill more than we can eat."

not at Barney's back. Instead his leap carried him past Barney on one side and up against the bars where he used his own momentum to change direction without losing speed. He did it by pushing against the bars with his feet, like a boxer coming off the ropes. Barney, about to turn, saw the lion coming and stopped dead in his tracks. The lion missed, sailing through the air past Barney's side. Barney threw out his trunk and caught the lion in mid-air by a front leg. He slammed the lion onto the ground and lunged. The lion screamed and twisted desperately but both tusks stabbed through his body and the fight was over.

The stout-hearted little elephant, his head and face in ribbons, continued to gore the body of his foe until he was dragged away by the police elephant.

It was a magnificent fight.

Later I learned that the battle had been such a success that the owners continued the feature, hoping that the next lion or the next would dispose of Barney. Barney killed every lion they put in the cage with him and, even though the lions cost something like 2000 pesos each, the show was still showing a nice profit.

The time soon came though when they were running out of lions and with no more readily available the battles were discontinued. Barney, now a seasoned killer, became so unmanageable he had to be sentenced to death once more.

On a hot dusty lot outside a remote Mexican village Barney died an ignoble death before a firing squad.



Cold, Cruel And Calculating

Possibly no form of animal life is so untouched by the higher emotions.

(Continued from page 20)

The long weeks of patient waiting, watching, planning had paid off. Sate was never seen again. The long memory of the crocodile had seen to that.

The designation "crocodile" applies to any member of the Reptilian order *Loricata*, which has only 21 living species and includes the largest reptiles now in existence. Mostly it is restricted to the two genera, *crocodylus* and *osteolaemus*, in contrast to the alligator and cayman. The family geological history is very ancient, going back to Jurassic times.

In the more florid prose of the last century it was the fashion to refer to crocodiles as "loathsome saurians." It is not hard to accept this label. Morose, stealthy, fear-inspiring, uncommunicative introverts, they admirably fit the bill. Possibly no form of animal life is so untouched by the higher emotions. Neither sex wants much of the other and it is one of nature's miracles each season that so many baby 'crocs' survive the cannibalistic habits of their eld-

ers.

Crocodiles are mostly aquatic and in water they have developed their most fearsome characteristics. These beasts possess an incredible patience, allied to deep cunning and acute senses of sound and smell, the silent speed of a torpedo, and tremendous muscular strength: all actuated by as mean a disposition as ever was known.

Africa has no alligators, only an incalculable number of crocodiles which always are feared, frequently respected as housing the spirits of departed friends and enemies, and occasionally worshipped as gods.

Under the European law they receive no protection and, classed as vermin, may be killed without license in most African territories. Their complete extermination has long been regarded as desirable but incapable of achievement. Recently, with the development of a luxury leather trade in their hides it is held in some quarters that protection

should be given them. The soft underbelly skin, processed in England, makes up into goods worth close to 200 dollars. In the world-wide craving for dollars, crocodiles have assumed an undreamt-of popularity. The profit margin is big, but bigger still is the reluctance of the owners to part with their hides.

Contrary to common belief, crocodiles subsist mainly on a fish diet. Game, cattle, dogs and human beings are acceptable, for it is in the nature of the brutes never to pass up opportunities to stock the larder against lean times, much as any prudent housewife would do. However, in place of serried rows of gleaming preserve jars are heaps of putrefying flesh, horns, hooves, and sometimes filthy remnants of cloth and a brass button or two, all mutely testifying to the origin of supply. Here they would seem to demonstrate the virtue of thrift, but there is a scientific explanation for this hoarding. They are without tongues, and the act of swallowing is an agonizing performance, even for the onlooker. The eyes roll and drip tears—which they do easily and in any circumstances—and there are convulsive movements of the jaws and throat. There seems to be nothing of pleasure in the business essential for keeping body and soul together. Clearly, they have learned that the more putrid the meat dish the less effort in consuming it. So they have evolved a habit of taking their victims to under-bank lairs which are referred to as larders and leaving them to soften up. The entrance to a lair always is below the water level, and the floor above normal water level. It is in connection with lairs of crocodiles that some of Africa's tallest tales are told. With variations the story concerns a man who, taken by a crocodile, awoke in the brute's noisome larder amongst a welter of bones. As he gathered his scattered wits he realised where he lay and saw in grim detail the horrible fate that awaited him. Then, providentially, he saw a gleam of friendly light overhead and feverishly tearing at the earth he broke through to safety, speeded by the sound of clashing jaws as the crocodile returned. These accounts are not uncommon but they all share one important characteristic, along with the Indian Rope Trick, of lacking reliable, irrefutable verification.

The shocking array of teeth, thirty-four in each jaw, of the blunt-snouted African species, have the unusual ability immediately to replace themselves. It is a capping principle, like one cone slipping into another, with the effect that when a tooth is broken off or is shed with age a replacement is revealed ready for use. So far as is known, the full set is perpetuated until extreme old age. It is difficult not to be envious of this ability.

The teeth reflect one of the most ob-

vious distinctions between crocodiles and alligators. In both cases the fourth tooth on each side of the lower jaw is larger and stronger and is called the "seizer." In the 'gator, seizers fit into internal pits in the upper jaw when the mouth is closed. With crocodiles, they slide into external notches on the sides of the upper jaw and regain visible at all times. This helps to create a strong atmosphere of insincere amiability which, along with a tendency to weep easily, has done so much to build up a reputation for hypocrisy, and to make the term "crocodile tears" synonymous with pretended grief.

All members of the crocodilian family make little use of their teeth except to seize and hold. Some are always lost in any struggle with a large animal. A further instance of Nature's extreme kindness to crocodiles in dental matters is *Pluvianus Aegyptius*, alias the Plover, better known as the croc's best friend. With their eating habits, it would be unreasonable to expect the saurian's mouths ever to be in a clean and wholesome condition. However, it is the plover's mission in life to valet the mouths of any crocodiles he comes across. On any quiet, sunny sandspit these birds may be seen industriously pecking away at their host's teeth. There is no more incongruous sight than a thin-shanked bird nonchalantly strolling in and out of the wide-spread jaws of an enormous crocodile.

Hunters detest these birds and would gladly wring their scrawny necks, for they never fail to detect danger, long before the more than acute senses of the crocodiles have picked it up, and to give warning with shrill cries.

Except where a bull-headed charge is essential, the initial grip of a crocodile on making an attack is gentle, although very firm. Men have stood waist-deep in water with a croc-gripping one leg. Making no move or sound they have signalled their predicament without giving alarm. In one case a man escaped by having a shotgun passed to him. With infinite care he brought the muzzle into contact with the croc's head and blasted it with both barrels. By reason of their unusual heart construction which prevents the admixture of arterial and venous blood, they are able to remain submerged longer than any warm-blooded type.

There are some widely-shared misconceptions about these reptiles. One is the alleged armor-plate quality of the hide. A .22 leaden slug, fired at a flat angle from a reasonable distance will penetrate and even kill the largest specimen, if well placed. Should a more certain effect be sought, a heavier bullet with a greater muzzle velocity should be used. The arm pit is the best aiming point, carrying through to the heart. Since a crocodile's brain is likened to that of a hen's for size, head shots are not ad-

visable. Week-end hunters will assert with graphic illustration that the quarry always will regain the water, however hard hit. In actual fact they can be immobilised by the heart shot when lying within six inches of deep water. While a shot through the brain will kill a warm-blooded animal instantly, in a crocodile, turtle or snake there may be more or less muscular activity for several hours, which may explain accounts of their invariably regaining the water.

Another belief is that they never attack boats. This is a comforting thought when cruising along in a frail dugout canoe with less than four inches of free-board. But it is not strictly so, as it is on record that they have attacked small craft deliberately and with success. It may be there is an analogy here between old and mangy lions who become man-eaters and crocodiles which attack boats. As with maneaters there are few crocodiles who have lit upon this simple method of bringing in the groceries. Though there is no evidence to suggest working alliances ever are formed between hippos and crocodiles, it does occasionally happen that the former will surface under a river craft with resulting benefit to the latter.

The largest recorded African crocodile measured over nineteen feet in length and weighed over five tons. In Australia, where they go to sea, they have been asserted to reach thirty-three feet, weight unstated.

The tremendously heavy and muscular neck of a crocodile is beautifully articulated and permits the jaws to snap at right angles to the body. The tail is equally heavy and well muscled, and from it comes the terrific propulsive speed exhibited by the animal when charging in water. The thrust tends to create a tell-tale surface swirl which, to the observant, is a certain give-away. If the prospective victim is in the water the signs are of little help to him.

Food is eaten by crocodiles by their first breaking it up by ripping and tearing with the front and hind feet as it is held in the mouth. The front feet have five horny claws as much as six inches in length, and the four-clawed hind feet also are capable of inflicting fearful damage.

Where possible, the reptiles adopt a stealthy approach. They can float motionless and submerged, except for the nostrils which are situated in a raised pad at the snout extremity and the eyes which are on the same level on the top of the head. The ears outwardly consist of slits below the eyes, and a flap of skin growing out from the head serves to close them when under water.

Crocodiles are designed for great strength and tractive power. A large croc having secured a grip on the muzzle or leg of any animal smaller than an elephant will succeed in dragging the victim into deep water. On occasions the

tail is used to flail objects off low banks and rocks. Birds perching cautiously on overhanging low branches, even monkeys, are taken this way. Drowsy fishermen are known to have been picked off, too. But the big reptiles appear to respect full-grown hippopotamuses, which in many localities live in the same lakes and rivers.

Crocodiles are oviparous, laying as many as sixty hard-shelled eggs, similar to those of geese, which are deposited in a shallow depression in sand or mud, then covered to a depth of about twelve inches and abandoned. Thereafter Nature does the rest, though the mother crocodile is apt to remain in the vicinity. The eggs have a custard flavor and are regarded as a delicacy by some Africans. When ready to hatch, croc babies cry loudly and set about delivering themselves by means of a cunning gadget, known as the "egg tooth" set at the tip of the snout and which drops off when the shell has been vacated.

The youngsters have to face the world alone from the moment they are hatched, in fact, from the moment the egg is laid. They appear to know this for they come out fighting with all the meanness of an adult. They average nine inches in length at birth and are as anti-social as their parents. They have been known to hatch out in a man's pocket whilst being carried and to have announced their arrival with a sharp nip. Fortunately, the eggs are preyed upon by monitor lizards and wild cats. Some of the African Governments pay a bounty on eggs brought in.

Physically, there is little difference between the crocodile and the alligator. People who know both are of the opinion that the African crocodile has a more unpleasant disposition.

One point worth knowing is that while they are unbeatable in water and have a fair turn of speed on land, they are there unable easily to change direction. Steer a zig-zag course and the odds go out against their catching you.

Books Bought and Sold

Also SEA SHELLS

all branches of natural history.

JOHN Q. BURCH

1584 W. VERNON

LOS ANGELES 37, CALIF.



Iguanodon was a herbivorous dinosaur with peculiar human-like hands.

THE MOST TERRIBLE CREATURES EVER KNOWN

(Continued from page 27)

air. The period in which they flourished has aptly been called the Age of Reptiles. They were indeed the dominant and unchallenged form of life almost to the end of their long career.

The group of reptilian animals known as dinosaurs came into existence at the beginning of the Mesozoic era, some 180 million years ago. This was at the dawn of the Triassic period, a geological division that lasted some 30 million years. The dinosaurs lived through the Triassic, meanwhile growing larger and more specialized. They endured through the subsequent periods, known as the Jurassic and Cretaceous. They died out at the end of the Cretaceous, about 75 million years ago, just as their successors, the warm-blooded, hair-covered mammals, were getting under way. Thus, from beginning to end, the dinosaurs reigned some 105 million years. Although there have been movies in which dinosaurs and men were pictured as contemporaneous rivals, no evidence has been unearthed which would make man, even in his most primitive form, more than a million or so years old. Also, no fossil remains of dinosaurs have been found of an age of less than about 75 million years. Only a novelist, or a movie script writer, could ignore and bridge over a gap of more than 70 mil-

lion years to show men and dinosaurs together.

The nearest living relatives of the dinosaurs are on the one hand the crocodiles and alligators and on the other the birds. The only features in which a crocodile differs fundamentally from certain types of dinosaurs is that the crocodile has a false palate enabling it to eat under the water, together with a slightly different construction of the pelvis.

Contrary to popular notion, not all dinosaurs were large. The very earliest forms were only about thirty inches in length, and at least half of that length was of tail. These ancestral, lizard-like dinosaurs gave rise to two large and differing orders: the *Saurischians* (dinosaurs with "lizard-like hip bones") and the *Ornithischians* (dinosaurs with "bird-like hip bones"). The Saurischians included, in turn, three sharply-differentiated types: (1) the huge, land-and-water-living herbivorous dinosaurs; (2) the large and fearsome meat-eaters, who moved mostly on their hind legs; and (3) a group of "lightweight", bird-like dinosaurs, who ran on their hind legs and who, in one form or another, were either carnivorous or omnivorous. The second order, the *Ornithischia*, comprises three suborders of herbivorous, walking-on-four-feet dinosaurs:

one group horned, another armored, and the third group unarmored.

But to the popular mind there are only a few typical "dinosaurs": *Tyrannosaurus rex*, the terrible meat-eater; *Brontosaurus*, the gigantic yet harmless vegetarian; *Stegosaurus*, the peanut-headed, bird-beaked dinosaur with a row of plates down its back; and *Ceratops*, the three-horned, frill-necked dinosaur reminiscent of a rhinoceros. Let us have a closer look at these huge and spectacular creatures (meanwhile thanking our lucky stars that we did not live when *they* did!).

Fortunately, soon after the evolution of *Tyrannosaurus rex* at the close of the Cretaceous period, the race of dinosaurs suddenly came to its end. If it hadn't, possibly the mammals would never have developed, and man would not have come into being!

In contrast to *Tyrannosaurus*, *Brontosaurus* was a harmless giant. Although several times the bodily bulk of a *tyrannosaurus*, and larger than the latter in every respect except jaws and teeth, the huge *brontosaurus* was adapted to a herbivorous diet and peaceful living. He was no match for the ravenous, meat-eating dinosaurs as a machine of destruction. Accordingly, when one or more of the meat-eaters found a *brontosaurus* on land and attacked the mountainous brute, the result must have been a massacre. *Tyrannosaurus*, incidentally, could never have attacked *Brontosaurus*, since *Tyrannosaurus* did not come on the scene until 50 or 60 million years later. His place was well filled, however, by one of his ancestors named *Allosaurus*.

The name *brontosaurus* (meaning "thunder-lizard") was given to the huge, herbivorous dinosaur in the supposition that its heavy footfalls shook the ground like thunder. Probably, the weight of *Brontosaurus* was so great it walked on dry ground only when it had to, and preferred to walk, or swim, in water. Possibly, it wanted to keep its feet from being crushed under its own weight! Confirmation of this idea is seen in a number of sets of footprints of *brontosaurians* that were discovered, perfectly preserved, in 130-million-year-old mud that had hardened into rock. In none of these preserved tracks is there any evidence of tail-dragging. Hence it is reasonable to conclude that the huge reptiles were walking in water that was deep enough at least to float their tails. And the fact that they could thus walk in water, without being buoyed up by it, was made possible by the solid, massive formation of their bones, which were very dense and heavy. In some other large types of dinosaurs (*Diplodocus*, for example) the

bones were, in contrast, exceedingly light and bird-like—so much so, that their owners could not have walked on a river-bottom had they wanted to. In passing, one more fact about Brontosaurus may be noted: although it was 70 feet or more in total length and weighed possibly 25 or 30 tons, its brain weighed only a *pound*!

Speaking of brains, none of the dinosaurs were intellectual giants. One of the least distinguished in this direction, if not actually the most brainless of the lot, was Stegosaurus. This remarkable animal, which lived contemporaneously with Brontosaurus in the Jurassic period, was a veritable living tank. Indeed, its name means "covered lizard". Stegosaurus was about 20 feet in length and of the bulk of a large elephant. While it walked on all fours, its fore limbs were much shorter than the hind, so that the highest point of its back was at the hips. Down the middle of the back there were two rows of erect, leaflike, triangular plates, arranged alternately, while the end of the tail was armed with four long, sharp spikes, capable no doubt of delivering lethal blows. It is possible that this "armoured" dinosaur bore even more weird ornate decorations, but that they were of material that did not fossilize.

To get back to the tiny head and brain of Stegosaurus, its entire cranial cavity had the volume of only a 1½-inch cube, and its brain could not have weighed over 2½ ounces. Compared with a 15,000-pound elephant, the brain of which weighs about 12½ pounds, the intelligence of Stegosaurus must have amounted to only about 1/80 as much! In contrast to its brain, however, the enlargement of its spinal cord in the hip region was over 20 times as great! This indicates that Stegosaurus had more "brain" to control the movements of its huge hind limbs and tail than it had to think with! This grotesque production of Nature was, it would seem, largely an automatic, walking, flesh-and-blood machine!

Triceratops, the "rhinoceros-like" dinosaur, lived, like Tyrannosaurus, at the very end of the Upper Cretaceous, some 75 to 80 million years ago. Unlike the chronologically-impossible battles shown in the movies as occurring between Tyrannosaurus and Brontosaurus, or Tyrannosaurus and Stegosaurus, it is probable that frequent encounters between Tyrannosaurus and Triceratops *did* take place. In such a fight the immense defensive armor of Triceratops would have stood him in good stead, the hood-like neckpiece in particular protecting that vital part of his spinal cord. Also, even though on the defensive, it is likely that Triceratops would have made frequent, rapier-

like thrusts with its long, sharp horns that would have given the fierce tyrannosaurus plenty of trouble. Indeed, it would probably have been difficult for the "king of the tyrant lizards" to have gained a death-grip on Triceratops unless the latter in some manner exposed the vulnerable underside of its throat. Triceratops was from 20 to 30 feet in length and stood about eight feet high at the hips. Its gigantic, parrot-beaked head, inclusive of the frill that flared over the neck and shoulders, made up fully a third of the entire length of the animal.

In addition to the aforementioned types of land-dwelling dinosaurs, there were two other interesting groups that deserve special mention. One was the aquatic order *Sauroptrygia*, comprising among other forms the well-known "open-sea paddlers" known as plesiosaurs. A brief description of a plesiosaur puts it: "like a snake strung through the body of a turtle". The "sea serpents" that crop up in the news very often conform in most cases with this description. So far as can be confirmed, the plesiosaurs died out at about the same time as the land-living dinosaurs, namely at the close of the Cretaceous period, about 75 million years ago. They were big creatures, up to 50 feet in length. As they propelled themselves over the water with their large, paddle-like flippers, they must have presented a strange sight, had there been anyone on earth at the time intelligent enough to have noted it.

The second interesting group is the pterodactyls, those remarkable "flying dragons" that complemented the land-and-water dominion of the reptiles by extending it into the air. The name pterodactyl means "wing-fingered", and it properly describes those odd, reptilian creatures whose wings were like those of a gigantic bat. The pterodactyls flourished through the same long period as the land-living dinosaurs and the aquatic plesiosaurs and ichthyosaurs. They were akin to birds, the two groups having probably descended from an ancient common ancestor. The pterodactyls were, however, true flying reptiles, their wings being of skin alone, without feathers. Again, particularly at first, they had jaws, not beaks, which were filled with numerous, sharp, meat-eating teeth. That they possessed the power of sustained flight is indicated by certain remains that were found in association with marine reptiles and fishes, evidently far from what was then the nearest land. Their wings, however, were different in construction from those of either bats or birds. The pterodactyls ranged widely in type, size, and distribution. Some were no larger than a sparrow, while others reached a wing-

spread of over 25 feet! Imagine a "flock" of these odiferous, clattering, leather-winged dragons whizzing by overhead to their favorite lunching place! It is, however, more likely that they "operated" singly rather than in numbers.

One of the most pertinent questions about the dinosaurs and their relatives is "What caused them to die out?" For a class of animals that dominated land, water and air for over 100 million years to become, suddenly as it were, extinct in all three realms is indeed a major mystery. Paleontologists say that there is no short and simple answer to the question. One factor is that at the time the dinosaurs were "on the way out", the mammals were just coming into power, and their greater intelligence and adaptability won out over their reptilian competitors. After a hundred million years the dinosaurs were an old group anyway, and what is known as "racial senility" was beginning to have its effect upon them. Again, over a period of millions of years, slowly but nevertheless inexorably there was taking place a change in climate and living conditions. The once-lush, tropical lowlands, which for untold ages had provided abundant food for the herbivorous dinosaurs and, indirectly, for the carnivorous ones which fed upon them, gradually changed to rolling uplands, hardwood forests, and a cooler, drier, and (for reptiles) less sustaining climate. This, for the relatively unadaptable dinosaurs, was the death-knell. In favored regions a few types of reptiles, notably the crocodiles and alligators, managed to live on; but the vast majority—on land, sea, and in the air—vanished, never to return. And with their passing went what must be called one of Nature's most successful groups of animals—successful, that is, in view of the fact that they dominated all other groups despite their brainlessness. If the human race endures even a fraction as long, it should attain new heights of greatness!

The Animal With The "Golden" Teeth

(Continued from page 31)

"teeth" is a herculean task particularly for the inexperienced hands of the average African native. Also it is a gory job usually accomplished under odds—heat, tsetse flies, the stench of sweating natives—and therefore seldom witnessed by Americans on safari.

Tools employed in cutting out the ivory run the gamut from an over-sized bush knife—too often used in Mau-

Mau murders and locally known as a "panga"—to the two-handed adz. The initial skin and flesh cutting is effected by use of the knife. Shortly beneath the skin, when the honey-combed, cellular tissue is reached, a single-bladed axe allows the tusks to be roughed out. Finally, an ordinary hand axe is employed to cut through the last layer of cellular bone encasing the root-end of the ivory. This is a delicate job. A slip of the axe, resulting in a nick in the ivory, materially cuts into the final price an Indian trader in Nairobi or Arusha will pay for the tusks. Or, a bad nick will up the price a state-side taxidermist will extract for polishing and mounting the trophy ivory.

When the ivory is finally cut out, a bit of cutting at the base end of each tusk allows for extraction of the nerve. It is not until this final step is achieved that one can tell accurately what the ivory weighs. For the nerve in a 60-pound tusk can weigh as much as 30 pounds . . . and often does. The longest tusk from an African elephant measured 11 feet 5½ inches. It is now in the National Collection of Heads and Horns, at the Bronx Zoo. The heaviest pair of tusks weighed 236 pounds and 225 pounds, respectively, and the larger of the two was 10 feet 1 inch in length and 23¾ inches in girth at the base.

As an old native adage goes: "Better to be a small hen than an elephant with a toothache."

Did You Know?

(Continued from page 5)

During their period of fastest growth, young birds consume more than half their own weight in food every day. If a growing boy ate like that, he would need from 20 to 40 dollars' worth of mixed food a day!

A praying mantis may attack one of its own kind as well as some other insect. When two mantises thus clash, they put on a spectacular "duel", using their sword-like front legs to slash and chop each other into pieces. Along with the bee, but for a different reason, the mantis is one of the most useful insects to man, by reason of its enormous consumption of smaller insect pests.

Evidently a platypus can distinguish colors, since the first platypus brought to this country had a strange aversion to women in red coats. In due course, however, the platypus became accustomed to the red color.

About the only time that a hyena "laughs" is when he is hungry and in search of food

Certain kinds of sea birds, such as

terns and penguins, drink sea water in preference to fresh. In fact, some species are wholly averse to fresh water and may become ill if forced to drink it!

Laboratory tests have revealed that the common eel is valuable as a source of oil, as a food for poultry, and as a fertilizer. In addition, it is one of the richest sources of vitamins.

In Philadelphia, an odd strain of mice was discovered by Dr. T. S. Hauschka while making studies of cancer. In these mice, on the average, two daughters are born for every son. The mice have a lethal gene in their makeup which kills half the unborn males.

While rodent-killing birds are protected by law in a number of states, harmless snakes, which perform at least as great a service, are killed on sight. This indiscrimination is costing American farmers millions of dollars a year. Snakes are one of the greatest enemies of rats, mice, and other destructive rodents, and they hunt them at night when hawks are inactive.

Not all kinds of animals grow larger as they become older. In certain species of swallows, for instance, the young birds will actually lose as much as a fourth of their weight in "growing up" to the adult stage.

If a giraffe happens to catch a whiff of some strange odor while it is having its dinner, it is likely to become very nervous and upset.

Among Mongolians, the names of animals are made up from different sounds than those used by Europeans. To an American child, a dog says "bow-wow", but to a Japanese it sounds like "wan-wan". The American cat goes "meow", but the Japanese kitty says "nyan-nyan". An American horse "neighs", but to a Japanese he "hin-hins"; and so on for other animals.

The smallest species of bird in North America is the calliope hummingbird, which weighs on the average only 3 grams or less than a one-cent piece. It would take 145 of these tiny "hummers" to weigh a pound!

A mouse's "living territory" is not very extensive. The average male mouse of the barn-living type confines its wandering to a range about 60 feet in diameter. The female—evidently more cautious—similarly covers only 40 feet during a whole season.

Identical twins appear to be a frequent occurrence in the offspring of the pronghorn antelope of the Western plains.

A famous animal that was actually extinct (since the year 1627) has been

"re-created" by science! This is the urus, or aurochs, the chief ancestor of present-day domestic cattle. Its "re-creation", which was carried on in Germany in the 1930's, was accomplished by "breeding back" to the urus by crossing several different types of European cattle that had descended from it. So, now, the urus can be re-created at any time, any place.

Monarchs of The Frozen South

(Continued from page 29)
octopuses) also are eaten.

Sometimes a leopard seal will come up alongside an ice-floe on which penguins are resting and sweep one off in its great jaws. These seals often lurk, out of sight, near a penguin rookery, ready for a quick dart among any of the birds that dive into the sea. It is knowledge of this habit of the leopard seals that makes penguins so reluctant to take to the water.

In eating a penguin, the leopard seal brings it to the surface and shakes it like a terrier with a rat. Then the seal holds it by the belly and continues shaking until the skin is completely inverted, shed like a glove.

One authority found the bodies of 18 penguins, in various stages of digestion, in the stomach of one leopard seal he shot.

The elephant seal, as its name betokens, is the largest of its race and one of the heaviest of land mammals, being surpassed only by the elephant. The average length of a bull elephant seal is 15 feet, and the average weight about two tons. Such an animal will eat about 300lb. of fish each day. As wild specimens 22 feet long have been reported, it is possible that the maximum weight of the elephant seal reaches six tons or more. The females are smaller in proportion to the males than in any other species of mammal, weighing only 600 or 700 pounds or about a sixth of the weight of the male!

Elephant seals spend all winter at sea, but at the approach of spring they congregate on the beaches of South Georgia for a breeding season of about two months, during which both bulls and cows go without food. The bulls are polygamous and they gather a harem of cows which are jealously guarded from rivals. The number of cows in a harem varies between two and thirty, but the average is a dozen to twenty. Fights between adults bulls are frequent.

When hurried and on a good surface, such as hard, level snow, a big bull can travel for a short distance at five miles an hour, about the same as a fast walk

in a man. They appear to be able to stay under water for about 15 minutes. Aside from man, the elephant seal has no enemies except the killer whale, the scourge of Antarctic waters.

Man was nearly responsible for extermination of the elephant seal. In the 18th century there were hundreds of thousands of the huge, ungainly animals off the southern extremity of South America. But the elephant seal industry had begun to flourish. The fur skins and the oil from the blubber were commercially valuable. The seals were slaughtered indiscriminately by the tens of thousands. In 1823, 20,000 tons of oil, representing at least 62,000 animals, was shipped to London alone from South Georgia. But for many years now the industry has been controlled and at present there are no fewer than 100,000 elephant seals which regularly breed at South Georgia.

Antarctic seals are well adapted for the rigorous surroundings in which their lives are cast. The thick, closely-fitting velvety coat of fur and their abundant fat, two or three inches thick, act as efficient insulators against the extremely cold temperatures met with on the Polar ice and in the surrounding seas. While they differ in their ability to progress in water, all seals are expert swimmers and have no difficulty in capturing an abundance of food. It is true that their speed is often insufficient to save them from their hereditary foe, the killer whale, but the abundance of seals in the Antarctic indicates that these ferocious dolphins do little more than act as a necessary check to the increase in the seal population.

The seal is a meat-eating mammal, living in the sea or on sea-ice. Yet it must have fresh water. This it obtains by manufacturing it in its body as a product of digestion. A special mechanism in the kidney preserves the meagre supply thus produced by preventing the kidney from secreting it too rapidly. The kidney secretes water only when it is necessary for the elimination of wastes from the body.

There are some 25 species of seals found throughout the world, and five of these belong to the Antarctic regions. These are, in addition to the leopard and elephant seals, the Ross, crabeater and Weddell. These are all hair seals. In addition, a few of the now very rare southern fur seals are occasionally found in the sub-Antarctic.

The Ross seal is the rarest, and only about 50 have ever been seen. It is a large seal, and one has been taken which measured nearly eleven feet.

The Ross seal eats fish and crustaceans, but lives mainly on soft-bodied cephalopods. To aid it in capturing and

swallowing such slippery fare, its incisors and canines are like needle-pointed recurved hooks. This seal is probably the fastest of all, its torpedo-like shape and comparatively huge flippers giving it a speed which appears fast enough even to outpace the rapid killer whales.

In contrast to the Ross seal, the crabeater is the most abundant seal in the Antarctic and, is probably the most abundant seal in the world. It is essentially an animal of the pack-ice and is the first seal to be seen by ships approaching the Antarctic Continent. It is large; adults weight some 500 lb. and measure about eight feet. It lives on shrimp-like crustaceans three or four inches long. These are filtered from the water with the aid of the highly specialised many-cusped cheek-teeth which, when closed upon one another form a sieve. The teeth have become so perfectly adapted for this purpose that they are useless as grinders. It has been suggested that the grit which is always found in the seal's stomach and intestines serves to grind up the shells of the crustaceans.

Nearly every crabeater examined shows evidence of wounds, either freshly-made or showing as shining white scars. The great majority are due to attacks from killer whales. The great teeth of these dolphins inflict long, raking cuts, sometimes twenty inches long. The cuts usually occur in parallel pairs, about two inches apart, and appear to have been inflicted from below and behind. In the stomach of one killer there were found thirteen porpoises and fourteen seals!

The Weddell seal has been studied more thoroughly than any other Antarctic seal. This is because, next to the crabeater, it is the most abundant of

the seals in this region, and also on account of its accessible habitat, which is the inshore waters of the Antarctic Continent and the adjacent islands.

The Weddell seal lives on fish and cephalopods. But it is not a voracious feeder. When full, its stomach holds only sixteen pounds. But Weddell pups must be among the most voracious feeders among all seals. They put on weight at the rate of some seven pounds a day for the first five weeks of their life.

The Weddell seal is, apart from man, the most southerly ranging mammal in the world. It is also probably the laziest animal in the Antarctic.

Not until he is actually touched does the seal really make an effort to get away. But in defence of its young a female Weddell seal will attack viciously, and Herbert Ponting records two cases where these seals attacked him, one of them biting his leg. He also witnessed brave and repeated efforts of a Weddell seal cow to save her young from killer whales by decoying them from her young by deliberately swimming in front of them.

On land, the Weddell seal progresses by a sort of caterpillar action, alternately jerking forward the pelvis and pectoral regions. In water, the seal has a cruising speed of about eight miles an hour, but, when pressed, it can, no doubt, go much faster. How long it can remain submerged is not known, but as Eskimos have claimed that bearded and hooded seals have been known to remain under for fifteen minutes it is reasonable to assume that the Weddell seal can remain submerged for approximately the same period. In this connection it may be pointed out that studies on such water mammals as seals, beavers and muskrats, which can with-



stand submersion for about five times as long as land mammals, have shown that they are relatively insensitive to carbon dioxide. On the other hand, these animals are highly sensitive to a low concentration of oxygen in the inspired air.

Weddell seals spend the winter under the ice. That they can do so and still breathe is due primarily to their use of special breathing holes which they keep open in the ice. As these holes tend to freeze up rapidly, the seals frequently scrape the ice away with their canines and incisors, particularly those of the upper jaw. This "ice-sawing," as it is

called, causes excessive wear on the anterior teeth. Such teeth in young Weddell seals which have spent only one winter beneath the ice show signs of wear at the tips. After a few winters the teeth are often so worn down that the tooth cavities become exposed, and then abscesses are formed, necrosis sets in, and the teeth may drop out. The seal is then unable to keep open adequate breathing-holes in winter beneath the fast-ice. Death by drowning cannot then be far off. G. C. L. Bertram considers that this is probably the most potent single cause of mortality among Weddell seals.



Sumi Su jumped up and grabbed the door handle with one paw, depressed the latch with the other and kicked the door jamb!

Dogs and Cats

(Continued from page 33)

The Dog Star Over Hollywood

Dogs fill a great need in the lives of many people. But they fill a greater need in the complex lives of the stars.

Some of the lucky pooches such as Daisy of the Blondie series work for a living. Others stay at home to rule the roost.

The story of Daisy reads like a saga from rags to riches. Daisy, an ugly little mongrel, was dumped into a pet store window along with a basket of sisters and brothers. Rennie Renfro, the famous animal trainer, had to go on an errand that took him to downtown Los Angeles. His car broke down right in front of the shop. He spied the cute black and white mongrel, bought him for fifty cents and brought him home to the children who named him Daisy. (Daisy is a hei!) One day, also as if by accident, Daisy tagged along to the studio, posed for a screen test and landed a film contract.

Now Daisy rides around in his—I mean her own private station wagon. He—I mean she has her own bank account. Her earnings have paid for the

house in North Hollywood occupied by Rennie, Maidie, their two children and the new litter of Daisy's pups.

The Favorite Breed Of Your Favorite Star

Ezio Pinza selected a Dalmatian to be a playmate to his two children Celia and Pietro. Mr. Pinza chose this particular breed because Dalmatians are known for being gentle. The children in the big white house christened the black-and-white dog with the formal name of Larchmont.

Victor Borge dropped into a famous Park Avenue pet shop to buy a boxer for his walks through the Park. Somehow, two black poodles worked their black magic on him—and he found himself driving home with three dogs in a taxi!

Bob Hope has no preference when it comes to breeds. Any dog, mongrel or pedigree, can find ample room in his heart. However, he likes them in pairs around the house and goes in for contrasts in size.

A great many of the performers seem to prefer poodles, perhaps be-

cause poodles themselves are great performers. Poodles have a sense of humor, an almost human streak of vanity and an urge to dominate the center of the stage. Cliquot, the white poodle who lives with Joan Crawford, is a mimic in other ways as well. He has captured her style sense, loves to dress, primp, entertain company and admire his own reflection in the poodle parlor looking-glass.

Clark Gable invariably selects a pointer because his forte is fishing and hunting. Janet Leigh, who played many roles with the famous Lassie, naturally gravitates to Collies. Deborah Kerr leans to Scotties, having inherited a poodle name! Duffy, son of the famous White House Fala.

You Choose A Dog

Before you choose a dog, ask yourself these questions:

Are you nervous? Then do not select a high-strung animal.

Do you prize your furniture more than you might your pet? Then select a short-haired breed whose hairs will not be flying around and settling on your rugs, your chairs and your friends!

Have you children? Do not select a dog that is known to be rough.

Are you reserved? Select a calm breed. Some dogs are born to be pets. Others are rough and ready.

If you dislike exercise, don't choose a dog that requires a thorough work-out.

City or Country

Where do you live? Choose your pet accordingly.

A big dog belongs in the country. A small dog makes the best city dweller. For your country home, select a German Shepherd or a Collie. If you like to hunt or fish, pick a Pointer or a Setter to be your field companion.

A terrier, although usually very active, makes a very good city pet. Another ideal house pet is the Cocker Spaniel. If handled properly, the Boston Bulldog develops into a most affectionate companion.

Pointers on Making Purchases

Try to decide on the type that will suit your requirements. Be sure the dog is sturdy, healthy and strong. If possible, have the veterinarian examine him for you, either when you buy the dog or immediately afterwards.

It is best to buy a puppy. An adult dog usually has preconceived notions of his importance in the new household. He may dislike your children or your other pets. Of course, the puppy must be housebroken. But it is worth the trouble for beside the pleasure of watching your own training take root, you will see the dog emerge as your very own creation of good manners,



LETTERS TO THE EDITOR

Tell it to ANIMAL LIFE... 16 Hopkins Ave., Jersey City, N. J.

OUT OF THE MAILBAG

TAKE YOUR CHOICE

Dear Editors: I do not know which one of you is responsible for cover selection, so I will include you both. What attracted my attention in your first issue was the bowed poses of the African bull and the male and female lions. That setup is a miracle! Look the bull over. He is a freak! He stands on his hind legs, with his front legs straight on the ground; and with the left front leg seemingly hinged to his body instead of coming from his shoulder! But most evident is the freak head—the front legs reaching out of his skull almost over the right eye . . .

Alison Secor

118 Cahawna Blvd., Hollywood 38, Calif. (Mr. Secor was editor of *Successful Farming*, Des Moines, Iowa, for nearly twenty years).

Dear Editor: Please excuse short note. I must say I think the first cover is simply splendid and the whole setup is not merely interesting, but full of genuine and really informative stuff.

Tramp van Diggelen

South-West House, Capetown, South Africa (Mr. van Diggelen is a noted African big game hunter, a frequent contributor to *ANIMAL LIFE* and other authoritative outdoor magazines).

IDEA!

Dear Editor: I find *ANIMAL LIFE* to be one of the outstanding magazines of its kind. I am 18 and extremely interested in animal life and its ecology. I think it would be very interesting and helpful if *ANIMAL LIFE* would set aside a section for their readers to correspond with each other and help one another with their various problems concerning animals.

Myron Peal

411 Ridgeway Ave., Cincinnati 29, Ohio (The Editors of *ANIMAL LIFE* will be very happy to create such a department if there are enough readers who want it. Let us know if you like the idea.)

BUFFALO BEEF

Dear Editor: The story "Death on the Veld," by Hal Hennessey, convinced me that this author probably never saw Africa. All cats can whip animals many times their weight. A lion can easily kill a 1400 pounds, not a ton. If, as I have read, two tigers could kill a cow, an elephant, what chance would the much smaller Cape buffalo have? A lion is a natural killer. Again, what chance would a gorilla have with a leopard? Let's have true stories than these.

John Rickard

Glen Cove, Long Island, New York (Mr. Hennessey is a bona fide African game hunter, and his account of the veld can be depended upon to give a true, clear account of whatever he witnesses. His story, "Death on the Veld," was the most popular piece in the first issue of *ANIMAL LIFE* among experts as well as lay readers. The weight of an average-sized Cape buffalo is 1850 pounds, so, "up a ton" is not an exaggeration, and the animal is certainly all "savag[e] vindictiveness." The buffaloes that are on the "menu" of the lions are the cows and calves, not the bulls. Experienced African hunters agree unanimously that one

lion would be no match for a bull buffalo in fair combat and that even two of the big cats would think twice before braving the massive strength and deadly horns of one of these animals. The celebrated Spanish fighting bull, a smaller animal than a buffalo, has been known to kill both a lion and a tiger in an arena fight in short order and even to kill a leopard in self-defense. With regard to the gorilla and leopard, see "Jungle Fury" in this issue. The aim of *ANIMAL LIFE* is to supply facts about birds and beasts, even when these facts run contrary to "homespun logic."

A TEACHER'S OPINION

Dear Editor: I teach biology and am continually looking for visual aids (pictures in magazines, for example) that I can use in class. Your magazine photos are particularly helpful in this connection and I can use the photos and drawings on our projector and have reports made. I was impressed with the clear style used in the magazine, that not only educates, but entertains.

Frank Newman

Levittown, Pennsylvania

ZOOS, TOO

Dear Editor: I enjoyed the first issue of *ANIMAL LIFE* immensely and was particularly impressed by the general educational value. There is so much of interest to the average person in nature that it has always seemed to me unnecessary to exaggerate to get popular appeal. I wish you all the luck in the world with your good work.

C. N. Baldwin

Director, San Francisco Zoo

FROM A TEENAGER

Dear Editor: I am only 13, but have always been interested in animals. I have read the first edition of *ANIMAL LIFE* word for word and think it is wonderful in every respect.

Bill McLarney

Randolph, New York

SCOPES

Dear Sirs: All your articles are very good with the exception of the one entitled "Labero—Animal Hypnotist," by Hereward Carrington. Labero may have been an excellent animal trainer, but I can't conceive of the use of hypnotism in the manner described. If the story is true, you should have it authenticated.

Eugene W. Gettig, Jr.

Sampson Air Force Base, New York (Whether or not lower animals can be hypnotized as are human beings, I can not be put into the skeptical state commonly called hypnosis. Labero was perhaps one of the few animal trainers who could hypnotize animals. I am sure that every kind of animal trainer probably uses the power of hypnosis to some degree. Dr. Francis Voigtges, the famous Hungarian hypnotic actor, showed at the Budapest Zoo that he could hypnotize a dog, a lion, tigers, bears and birds of various kinds—each within a few seconds. And at the London Zoo in 1936, Leopold Thomas, a professor of the University of London, hypnotized a chimpanzee. As to the report on Labero's act, the author, Dr. Carrington, is one of the world's foremost authorities on psychic research.)

WE WILL

Dear Sirs: I enjoyed everything in the magazine and hope that you will continue to print the same high quality in your articles, illustrations and photographs. Why don't you continue a series of articles such as "Hoofbeats Through History," tracing the origin of the horse and other animals? Again, I'd like to see a series dealing with the big cats, which are my favorites.

Mias Jean M. Forayth

Irvington, New Jersey

(We are planning articles such as you suggest. As a matter of fact, we have one on lions in this issue.)

AN AUTHORITATIVE OPINION

Dear Editor: In looking over the magazine, it seems to me that this first issue is a mixture of the good and the bad. Some of the features are very well done I think, and the illustrations, for instance, are particularly helpful in this connection and I can use the photos and drawings on our projector and have reports made. I was impressed with the clear style used in the magazine, that not only educates, but entertains.

Edwin H. Colbert

Curator of Fossil Reptiles and Amphibians American Museum of Natural History New York, New York

(It is diversity of opinion that makes horse racing, as Mr. Tolson once remarked. We have invited Dr. Tolson to contribute an article refuting the more or less widely credited theory that dinosaurs do still exist. We're only too happy to print both sides of any controversial issue.)

FROM AN ANIMAL TRAINER

Dear Editor: All my life I have been associated with some manner with the veterinary field and have spent the majority of these years in dealing with animals. I am partial to a few, but my interest lies in all of them. My preference is for the big cat family, especially the tiger. I am in charge of the Feline House at the local zoo and have about 34 charges to care for. In training animals I do not resort to chairs, whips, etc., but have learned all of mine with kindness, understanding, and by voice control alone.

I read your first issue of *ANIMAL LIFE* from cover to cover and liked much and every word, picture, drawing and department. What I liked most about the magazine was that it presented the *truth* in each and every article. Too, it is a magazine which looks at the animal from the point of view of the general public and the people who deal with animals as well.

From what I have seen and read in the first issue you have the power to present the true facts and have done so.

Clayton J. Peterson,

P. O. Box 495, Seattle 11, Washington

(Thanks for your kind opinion. You have stated our policy exactly.)

loyalty, obedience and spirit.

Male or Female—Which?

Many people maintain that a female is more intelligent than a male. Don't you believe it! There are just as many smart males in dogdom as there are in the male of the human species—and an equal number of female dumb Dorahs! Neither is a female more affectionate than a male. However, the male dog, like any man born to the wanderlust, is more likely to roam and leave home.

What Every Dog Owner Should Know

Insurance companies will give you a special rate if you have a watchdog around.

Milk is not only good inside your dog but outside as well. It makes a perfect eye wash.

You don't need an alarm clock if you train your pooch to wake you up at the same time every morning. Wake him up, on the dot, three days in a row and he will become your dependable Big Ben.

A recent census taken at a penitentiary proved that less than five in every one hundred prisoners ever owned a dog. *Moral:* Start early to make good citizens of your children. Give a dog to your boy—and he isn't likely to be a criminal when he grows up.

• • •

You may select your dog. But, as a rule, your cat selects you.

Perhaps your cat was shivering in a windy alley-way when you passed by. Perhaps you two met at a fashionable pet shop—and it was love at first sight.

If the cat-haters had their way and cats were annihilated from the face of the earth—within a week, the tremendous food stocks in the graineries would soon be alarmingly low.

The cat is essential to the stock-yard, the ware-house, the stable and the ship.

If you are a gardener, you know what your problems are in your own garden patch. The rabbits attack your garden and rob you of your food.

Now what is your only solution? An alert cat—or two—to act as your vigilant watchdog.

You Choose A Cat

In choosing a cat, you should decide whether you want a housecat to decorate your hearth, bring you peace, teach you poise and live with you in style. Maybe you expect your cat to work for its living. Maybe you want an ace vermin killer for your garage or barn. Perhaps you need a cat to serve as a playmate for your children.

Many a home is divided between acquiring a dog and adopting a cat. Perhaps the vote points strongly in favor of the dog and yet a cat, for more reasons than one, is more convenient in

your particular household.

If this is the case, get a Siamese kitten. You will be surprised at the number of dog traits you will find in this particular breed. The Siamese kitten will attach itself to one master, much like a puppy might, and give its dog-like loyalty exclusively to him. It will not resent a dog being brought into the home and will readily make friends with him and share its feeding bowl.

If you live in the country, try to acquire a red Tabby. This breed is an adi vermin killer. It does not stop at mice and rats but will take on weasels and even skunks and clean your premises for you.

The short-haired Tortoiseshell cat is beautiful, gentle, and yet makes a good mouser. The spotted silver Tabby is famous for its amiable disposition and for its warm regard for its home.

If you do not buy your cat at the pet shop, you can secure one without charge at your local A.S.P.C.A. or animal shelter.

Famous Cats of Famous Folks

The list of celebrities who own cats—or are owned by them—is a surprisingly long one.

There is Ethel Barrymore, Rita Hayworth, the James Masons and the celebrated John Murray Anderson.

A story of from rags to riches concerns itself with Rhubarb, the famous movie cat.

Rhubarb was born in an alley. He was an ordinary tom-cat, a 'lone wolf' because of his vicious nature and his ruthless tendencies. He fought every cat in the alley. He robbed every pan of its food. And then he decided to roam the wide world. He chose a porch in Hollywood and climbed its friendly stairs. A friendly pair of hands brought him food and water the first day, and the second. On the third day it was apparent that he had decided to appropriate the premises as his own—and so he remained in full possession for many weeks on end.

The trouble was that Rhubarb—previously christened Henry—challenged, fought and won every battle with every cat on the block. The neighbors complained, but Henry remained. The heart behind those friendly hands just could not put him out.

Then came the newspaper story. Paramount Pictures was looking for a cat to play the part of Rhubarb. The cat must be photogenic. It must have personality. And—it must be a fighter! Who but Henry could fill such a role?

And so Henry went to the studio and tried for a film test with hundreds of other he and she cats. Yes, it was Henry who won. He signed his new name of Rhubarb at the bottom of a fat con-

tract, bringing fame down upon his scared old battle-head and fortune to his kind-hearted mistress.

Other Stars In The Hollywood Firmament

Jane Powell recently acquired a new Siamese cat which she has christened Demi Tasse. Reason: the cat does on coffee!

Debbie Reynolds met her alley-cat in an alley-way!

Peter Lawford's *black* cat has a repertoire of dog tricks, including the show-stopper of being able to roll over and play dead! Pete says that cats are not as difficult to train as some people might think. If your cat likes you and has confidence in you—it will do whatever you ask of it. But a cat is proud and inclined to be self-willed. A cat can never be humiliated. It must be treated with tact, patience and understanding. You must never try to force your cat to obey you—and above all, you must never show your temper—or you will promptly lose your cat's respect for you.

What Every Cat Owner Should Know

Don't put a ribbon around your cat's neck to dress her up. It may be the cause of her death by strangulation.

Don't pick up your cat by the scruff of its neck. A cat has feelings, too.

Don't give your cat cold meat, cold milk or a cold shoulder.

Never smack your cat for it will never forget the blow.

Don't dump your discarded tin cans into an open garbage pail which may cut and bruise the hungry stray of the neighborhood.

It's a grave mistake to put out your cat at night in the mistaken notion that this is the right thing to do. A cat that is put out at night is subject to food poisoning, being run over by automobiles and freezing to death in cold weather. Besides, a cat can catch cold, too.

A cat measures a mouse's hole by the size of its whiskers which are the exact width of its body. If the hole is smaller than its whiskers it will not go inside because it knows that it will never be able to get out!

The total American cat population is about 21,000,000, approximately 50% of which are homeless, neglected and abused. 20% of all American families own one or more cats.

Do you know that no settler heading West back in those covered-wagon days would leave without having a cat among his household goods?

Are Cats Intelligent?

For months on end, members of the Richard Steiner family in Portland, Oregon, were puzzled by the fact that their front door kept opening myster-

riously at all hours of the day and night.

Finally they decided to play amateur detective in their own humble manner. They selected a hedge which served as a screen and there they finally caught the door opener in the very act of swinging open the portals. To their amazement, it was a member of their own household, none other than the female Siamese cat called Sumi Su who performed the trick! And it was no ordinary trick, either.

The cat jumped up and grabbed the door handle with one paw, depressed the latch with the other, kicked the door jamb with a hind foot and waited for the door to swing open. Then, with true feline politeness, she waved to her litter mate to enter. But he insisted on Ladies First, so Sumi Su paraded indoors with bright pride in her beautiful eyes.

Question and Answer Department

Dear Editor:

I just got a new pup. He's awfully lonesome for his sisters and brothers. He cries all night and keeps us awake. What'll I do?

Bobby C. Neward, N. J.

Dear Bobby:

Take an old clock with a loud tick and place it beside him in his new puppy bed. It will keep his company and quiet him down.

Dear Editor:

How can I keep my dog Nellie from getting car sick?

Sandra T. Brooklyn, N. Y.

Dear Sandra:

Don't feed Nellie for five hours prior to taking her with you. Two hours before you start out, give her a drink of water. Walk her around the block several times before you get into the car. An aspirin helps to keep the stomach quiet.

Dear Editor:

My dog has been suffering from a skin infection which I do not seem able to heal. I give him the best of food including a big dish of cereal and milk for his breakfast. He gets horse meat or hamburger at supper time. What can be wrong?

Mrs. S. Thomas, Stamford, Conn.

Dear Mrs. Thomas:

In all probability, it's the cereal that is causing the infection. Cereal contains carbohydrate and is often indigestible. Omit the cereal for a week or two. If there is no improvement in your dog, be sure to consult your vet.

Dear Cat Editor:

I had my female mated for which I paid a fee. However, there have been no kittens. Am I entitled to get my money back?

M. S. S.

Lynbrook, Long Island, N. Y.

Dear M. S.

You cannot expect a guarantee that any mating will 'take'. However, it is a practice among breeders of good standing to give you another service without cost to you. But you must remember that he does this as a courtesy. It is not an obligation on his part. So try again!

Dear Cat Editor:

What can I do for my cat who is constantly being troubled by hair balls?

M. G.

New York City

Dear MG:

Brush her, comb her, morning and night. It will remove the dead hair which she would otherwise swallow each time she washed herself. Dose with a teaspoon of mineral oil twice a week and it will rid the digestive tract of the troublesome hair balls.

To My Dear Readers

Send any question you would like to have answered, as well as pictures of your pets and interesting anecdotes to this department. Beth Brown

What Do You Like?

The only way we can fulfill our avowed purpose of giving you a better issue of ANIMAL LIFE each month is to find out exactly what you like and don't like. We'd like to have every reader consider himself one of the editors.

To find out just what you like and don't like so we can best fill your reading needs, we're going to ask questions. The question that most concerns us with this, the second issue of ANIMAL LIFE, is WHICH FEATURES DID YOU LIKE MOST?

For the BEST 100 answers to this question, in the opinion of the editors of ANIMAL LIFE, we will award a year's free subscription to this magazine.

Here's a list of the features in this edition and a brief questionnaire, on which you may enter your selection of the top three articles and your reasons for liking them.

Get on the editorial board of ANIMAL LIFE and win yourself a year's free subscription.

Jungle Fury

I liked _____

The First Okapi Ever Captured
by a White Man

Because _____

When the Dire Wolves Came

I liked _____

The King of Beasts

Because _____

The Durndest Fight I Ever Saw

I liked _____

Cold, Cruel and Calculating

Because _____

The Most Terrible Creatures Ever Known

I liked _____

Monarchs of the Frozen South

Because _____

The Animal with the "Golden" Teeth

I liked _____

Horned Death

Because _____

Did You Know?

I liked _____

Dogs and Cats

Because _____

Questions and Answers

I liked _____

(Use another sheet of paper, securely attached, to explain your choices, if you wish)

My name is _____

My address is _____

City _____

Zone _____

State _____

I am ____ yrs. old

ADDRESS TO: OPINION DEPARTMENT, ANIMAL LIFE PUBLICATIONS,

16-18 HOPKINS AVENUE, JERSEY CITY, N. J.

B E T W E E N T H E B Y - L I N E S

On this page, each month, we will introduce the reader to some of the writers who help to make ANIMAL LIFE unique among magazines. Some of their names you will recognize as leading authorities in their fields; others you will meet for the first time. All, however, will have something interesting, entertaining or educational to say—and the fact that they have chosen to say it here is a testimonial to the avowed objectives of ANIMAL LIFE.



ATTILIO GATTI

ATTILIO GATTI "I captured the First Okapi," (page 8) has been interested in Africa for 34 years. He has organized and directed 12 scientific expeditions and spent 15 years on African soil. He has made valuable contributions to the world's knowledge of Africa in the fields of zoology, anthropology, ethnology and paleontology. Gatti has discovered a new race of Okapi, captured alive the first Congo Bongo to be taken into captivity, and collected record specimens of the Giant Gorilla of the Mountains for Pretoria Museum, the Royal University of Florence, and the Witwaters-

rand University of Johannesburg.

Among Commander Gatti's achievements is also the creation of the first nucleus of the Northern Rhodesia Prehistoric Museum. He has donated large collections to the Royal Anthropological Society of Florence, Italy; to the University of Arizona, the New York American Museum of Natural History, and many others.

FRANK LANE "Monarchs of the Frozen South", (page 29) is the leading writer on animal wonders in England. Among his notable books have been "Animal Wonder World" and "Nature Parade", both of which reached best-seller proportions in England and sold very well in their American editions. Excerpts from both books have been printed in Coronet, Science Digest, and other magazines of general interest. Mr. Lane also has contributed extensively to British magazines, including Angling, Animal and Zoo Magazine, Animal Pictorial, Chamber's Journal, Country Life, Discovery, John O' London's Weekly, The Text, Lilliput, The Pocket Magazine for Everyone, and The National Review. Oh yes, he also broadcasts from time to time for BBC.

The exciting and interesting story, "When the Dire Wolves Came", (page 12), might well have happened just as it is described, as it is written by an authority on Western anthropology, DR. FRANK C. HIBBEN, of the University of New Mexico. Dr. Hibben spends his summers and sabbaticals-unearthing new anthropological finds in New Mexico



DR. FRANK C. HIBBEN

and might well have conceived the dire wolves' story from the tall tales the Indians relate around their campfires or, if they happen to be oil-rich Indians, in front of their television sets. Whether White Hair actually ever made his strong stand against the ravenous wolves or not, it could have been—and it makes mighty interesting reading. While Dr. Hibben is a student of wild life, he is first of all an anthropologist, having received his Ph.D. from Harvard in that subject. Besides numerous scientific articles, he has written a number of books for laymen, among them being "The Lost Americans", "Treasure in the Dust", "Hunting American Lions", and Hunting American Bears".

TROMP VAN DIGGELEN

"The King of Beasts", (page 14), is a Capeton, South Africa, businessman whose avocation is big-game hunting. At the drop of a topee he will dash up to the Cameroons or Uganda in search of outdoor recreation and thrills. Of all pursuits, van Diggelen considers elephant hunting to demand the most skill and physical endurance, although he has also hunted (and had some close calls from) lions, leopards, buffalo and rhino. As a young man he engaged in numerous vigorous sports and pastimes, among them being wrestling and weight-lifting, in both of which he was an amateur champion. Mr. van D. is a fine reporter whose mind records even the most minute details of his adventures, a prolific writer, and—in his spare (sic) time—an ardent big-game fisherman.



TROMP VAN DIGGELEN

Our popular editor of Dogs and Cats (page 32), BETH BROWN, brings to this department a lifelong store of knowledge on mankind's favorite pets. She has written innumerable stories about dogs as well as several books, among them "All Dogs go to Heaven," "Mr. Jolly's Hotel for Dogs," and "Everybody's Dog Book." The latter volume is a veritable treasure chest of information and a *must* for everyone who owns a dog or is thinking of adopting one. Miss Brown was educated at Columbia University and New York University and lives in New York City. Her hobbies include gardening, Bible study and, of course, Dogs and Cats.



BETH BROWN



Marsh Hawk (above) kills crows and field mice.

Canada Geese fly in formation, peal semi-miles when as land to warn of intruders.

Duck Hawk can fly 180 miles an hour.

Timber Wolf kills meat fresh for each meal except when it has to force it to use "leftovers."

Red Fox dashes bounds by crossing streams, disappearing over rolling ridge on a steep slope.

Skunk odor carries half a mile. Mud may turn skin or cause blindness.

Palouse Gila Monster clambers jaws in viselike grip when human hands can't pry open.

Praised by Thousands

"Should be in reach of every child Drawings are well done." — H. Y. Ohio
"Best nature book I've seen in my teaching years." — Mrs. F. G. Vi.
"My love for animals has been enriched by the knowledge this wonderful book imparts." — B. Col.
"Color plates are perfect photos very fine." — N. P. N. J.

White-Tail Deer (above) prefers bushy cover of woods rather than open fields. Giant Silver or Grizzly Bear (top) has tusks of 2,000 lbs. may stand 9 ft. tall.

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Originally this material was planned for a 5-volume Library . . . at \$2.00 a volume, or \$10.00 a set—a good buy compared to other sets selling much higher. Instead, we bound all 5 books in one big volume and slashed the price to \$6.05—dealing only \$3.05 per volume. *That's 1 - price of 1/5 the toy it 7 days* Free. If you keep it, remit only \$1 monthly. Otherwise, simply return and owe nothing. Entire edition is going fast. Mail FREE-Trial Coupon NOW!

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"Most Complete Volume on Wild Life in 35 Years!"

The "cowardly" coyote can actually give a good account of itself against the bull moose in the racing of the bull moose can hear 3 miles away, but the graceful, wapiti, or elk, won with a minimum of effort. . . . The king is the giant grizzly bear. One chased a hunter after having 4 shots pumped through its heart!

The Snake-Fighting Bird

The pale-colored, plucky bird can pace a horse for miles, will attack a raven-like, side-stepping the deadly fangs and pecking the snake to death when it is unclosed. *Pig that Hunts Man*

With long, wavy, mangy hair, togs and a mane, Timid by nature, when antagonized the black bear kills its food in a bone-crushing hug. Most formidable American bear, however, is the giant grizzly bear. One chased a hunter after having 4 shots pumped through its heart!

Crows Make Sea Rescue

Crows have a remarkable memory and can identify sea birds, their comrades help him ashore.

Meet the mighty caribou who can escape wolves, bear and even man but who can't peer for the first 100 ft. Meet the mysterious tiny seed with a monkey tail and a kangaroo's pouch. But the male has the pouch, and the female deposits her eggs in it! . . .

Do You Know? . . .

How often plays racing tag, following-the-master, and have coasting contests? Why come to town is worth \$20 a month to American farmers? Why one big city provides special houses for bats?

How eels, returning to their birth place, migrate thousands of miles to the ocean to breed and return to warm Sagasso Sea? How giant deep sea marlin entertain with dramatic jumps and tail-walks? How the prairie dogs help transform waste land into into little prairie?

50 and 60 MPH on No Gas

Do you know that jackrabbits stage realistic boxing matches, dash cross-country at 50 miles an hour, leap 7 foot fences? That one pronghorn antelope would have 1,000,000 descendants a year, if unchecked by natural destructive forces? That pronghorn antelope have been clocked at 60 miles an hour?

Multiply these snatches of animal lore a thousandfold by the author of the greatest book you have AMERICAN WILD LIFE — one of nature's greatest collections of living wonders on this earth!

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Glorious
FULL COLOR**
**Week's Trial
FREE**

Week's Trial
FREE

NOW READY! A new educational program for the whole family..sponsored by THE NATIONAL AUDUBON SOCIETY



In summer, the snowshoe rabbit is the same color as his tundra home. But when snow comes he begins to turn white—and soon he's camouflaged again!



Here are two unusual "look-alikes". One is the owl—which often alights *upside down* with his "owl eyes" showing! Nature "protects her own" with fascinating camouflage!



What will these unusual creatures grow up to be? You'd never guess!

FREE if you enroll now

THE CURRENT ALBUM
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RIIGHT NOW is an excellent time for you to find out about the National Audubon Society's revolutionary "Museum-at-Home" program. Mail the coupon below and you may have ABSOLUTELY FREE OF CHARGE the current set, **CAMOUFLAGE IN NATURE**, including thirty fascinating natural color prints plus informative text in what amounts to a book. (Value \$1.00.)

This generous gift will demonstrate to you and your family how much pleasure and knowledge can be derived from this new plan.

A Much-Needed Program

There is no subject more fascinating for young and old than Nature. How satisfying it would be if you could learn its mysteries in the personal company of friendly naturalists, such as those on the Staff of the National Audubon Society!

These scientists would show you how cleverly Nature "protects her own" with camouflage...explain the strange ways in which some animals reproduce, and rear their young. *Best of all*, they

would open your eyes to the wonders in your own back yard or park!

An Amazing "Museum-at-Home"

The "Museum-at-Home" plan was developed to bring to your home the closest possible equivalent to this kind of thrilling personal guidance. Each month a fascinating new topic is selected, and you and your family explore it together with the National Audubon Society's experts. For each topic, a collection of about thirty natural color prints—usually brilliant true color photographs—is issued, together with an album in which the prints (already gummed for this purpose) may be mounted. An interesting fact-filled text explains your "Museum-at-Home" exhibits. And the total cost is very low; only \$1 for each set, plus a few pennies for shipping.

Your albums and color prints will rapidly grow into an "armchair museum" of Natural History—a "museum" visited again and again by the whole family!

BEGIN WITH THIS FREE SET; WITHDRAW WHENEVER YOU WISH



You assume no obligation when you send the Enrollment Coupon at the right, and receive your FREE **CAMOUFLAGE IN NATURE** set. You may resign your enrollment at any time you wish. But we feel sure that once your family has become acquainted with the "Museum-at-Home" plan, you will want to continue these delightful "museum" visits for a while. That's entirely up to you, of course. However, we urge you to send the coupon NOW to be sure to get your first set **FREE**—and without obligation. Quantities are limited. Please mail the coupon without delay.



MUSEUM-AT-HOME Dept. AL-3, Garden City, N.Y.	
Please send me FREE the CAMOUFLAGE IN NATURE series including 30 natural color prints, and an album to mount them in, plus informative text. Enroll me in the Museum-at-Home plan and send me the subsequent series as they are issued. I understand that you plan to issue one series each month, in cooperation with the National Audubon Society, for which I need pay only \$1.00 plus a small charge for shipping. I may cancel my subscription any time I wish without further obligation.	
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